

GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 00:24:47 ; Search time 47 Seconds
(without alignments)
687.791 Million cell updates/sec

Title: US-10-057-532A-7
Perfect score: 2071
Sequence: 1 MAHHHHHPGSGSGGTMAIS.....TCECTKPDYPLFDGIFCSS 391

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 10%
Listing first 45 summaries

Database : Issued Patents_AA:*
1: /cgn2_6/ptodata/1/1aa/5-COMB.pep:*
2: /cgn2_6/ptodata/1/1aa/6-COMB.pep:*
3: /cgn2_6/ptodata/1/1aa/H-COMB.pep:*
4: /cgn2_6/ptodata/1/1aa/PTUS-COMB.pep:*
5: /cgn2_6/ptodata/1/1aa/RE-COMB.pep:*
6: /cgn2_6/ptodata/1/1aa/backfile1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	2071	100.0	391	2	US-10-057-531A-7 Sequence 7, Appli
2	2055	99.2	393	2	US-10-057-531A-3 Sequence 3, Appli
3	2008.5	97.0	431	2	US-10-057-531A-2 Sequence 2, Appli
4	2008.5	97.0	546	2	US-10-057-531A-1 Sequence 1, Appli
5	1970	95.1	375	2	US-09-710-000-8 Sequence 8, Appli
6	1968	95.0	383	2	US-10-057-531A-5 Sequence 5, Appli
7	1931	93.2	394	2	US-08-195-705-2 Sequence 2, Appli
8	1931	93.2	394	2	US-09-500-376-16 Sequence 16, Appli
9	1928	92.8	394	2	US-08-195-705-4 Sequence 4, Appli
10	1921	92.8	394	2	US-09-500-376-3 Sequence 3, Appli
11	1921	92.8	613	2	US-09-117-415B-22 Sequence 22, Appli
12	1166.5	56.3	631	2	US-09-117-415B-18 Sequence 18, Appli
13	1166.5	56.3	631	2	US-09-117-415B-20 Sequence 20, Appli
14	1166.5	56.3	631	2	US-09-117-415B-16 Sequence 16, Appli
15	1166.5	56.3	649	2	US-09-269-874A-5 Sequence 5, Appli
16	1166.5	56.3	1602	2	US-09-269-874A-7 Sequence 7, Appli
17	1166.5	56.3	1621	2	US-09-269-874A-5 Sequence 5, Appli
18	1166.5	56.3	1639	2	US-09-269-874A-3 Sequence 3, Appli
19	1163.5	56.2	384	2	US-09-500-376-8 Sequence 8, Appli
20	1161.5	56.1	355	2	US-09-175-684A-9 Sequence 9, Appli
21	1161.5	56.0	361	2	US-09-175-684A-10 Sequence 10, Appli
22	1159.5	55.1	594	2	US-09-117-415B-2 Sequence 2, Appli
23	1154.5	55.7	379	2	US-09-175-684A-11 Sequence 11, Appli
24	1040	50.2	377	2	US-09-500-376-5 Sequence 5, Appli
25	1040	50.2	377	2	US-08-195-705-3 Sequence 3, Appli
26	986	47.6	375	2	US-09-500-376-4 Sequence 4, Appli
27	986	47.6	375	2	US-09-500-376-4 Sequence 4, Appli

28	788	38.0	380	2	US-09-125-031C-12 Sequence 12, Appli
29	777	37.5	380	2	US-09-125-031C-13 Sequence 13, Appli
30	734.5	35.5	379	2	US-09-125-031C-11 Sequence 11, Appli
31	527	25.4	108	2	US-09-125-031C-10 Sequence 10, Appli
32	527	25.4	116	2	US-09-125-031C-5 Sequence 5, Appli
33	523	25.3	95	2	US-09-125-031C-2 Sequence 2, Appli
34	523	25.3	127	2	US-09-125-031C-8 Sequence 8, Appli
35	424.5	20.5	281	2	US-09-125-031C-14 Sequence 14, Appli
36	288	13.9	53	1	US-08-290-919-4 Sequence 4, Appli
37	277	13.4	48	1	US-08-290-919-12 Sequence 12, Appli
38	274	13.2	48	1	US-08-290-919-2 Sequence 2, Appli
39	272	13.1	53	1	US-08-290-919-3 Sequence 3, Appli
40	271	13.1	48	1	US-08-290-919-1 Sequence 1, Appli
41	256.5	12.4	106	1	US-08-290-919-11 Sequence 11, Appli
42	187.5	9.1	350	2	US-09-763-397A-2 Sequence 2, Appli
43	145	7.0	630	2	US-09-248-796A-20275 Sequence 20275, A
44	139.5	6.7	496	2	US-09-543-681A-6465 Sequence 6465, Ap
45	139.5	6.7	1010	2	US-09-134-001C-5178 Sequence 5178, Ap

ALIGNMENTS

RESULT 1
US-10-057-531A-7
Sequence 7, Application US/10057531A
Patent No. 6855322
GENERAL INFORMATION:
APPLICANT: Lyon, Jeffrey A.
TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
TITLE OF INVENTION: Protein-142 Vaccine
FILE REFERENCE: 003/241/SAP
CURRENT FILING DATE: 2002-01-25
PRIOR FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-10-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 7
LENGTH: 391
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: E. coli expressed P. falciparum MSP-142 (3D7)
US-10-057-531A-7

Query Match 100.0%; Score 2071; DB 2; Length 391;
Best local similarity 100.0%; Pred. No. 5.8e-149; Mismatches 0; Indels 0; Gaps 0;
Matches 391; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	1	MAHHHHHPGSGSGGTMAISVTMNIISGFENEYDVILKPLAGVRSKKQIEKNITF	60
DB	1	MAHHHHHPGSGSGGTMAISVTMNIISGFENEYDVILKPLAGVRSKKQIEKNITF	60
QY	61	NLNINDIINSLLKRRKYLDVLESDFMOFKIISSENYIIEISFLLNSEQNTLLKSYK	120
DB	61	NLNINDIINSLLKRRKYLDVLESDFMOFKIISSENYIIEISFLLNSEQNTLLKSYK	120
QY	121	IKESVENDIKFAQGISIYKEVKLAKYKDDLESIKKVIKESEKFPSSPTTPPSAKTDE	180
DB	121	IKESVENDIKFAQGISIYKEVKLAKYKDDLESIKKVIKESEKFPSSPTTPPSAKTDE	180
QY	181	OKESKFLPFLTNIETLYNNLVNKIDYLLNLKAKINDCNVEKDBAHVKTYSDLKAI	240
DB	181	OKESKFLPFLTNIETLYNNLVNKIDYLLNLKAKINDCNVEKDBAHVKTYSDLKAI	240
QY	241	DKIDLPKNYPFEAKIKLINDTKKDMGLKLSGLVQNPNTIISKLEGGKPDMLNIS	300
DB	241	DKIDLPKNYPFEAKIKLINDTKKDMGLKLSGLVQNPNTIISKLEGGKPDMLNIS	300

QY 301 OHQCVKQKCPENSGCFRHLDEREECKCLNLYKQEGDKCVENPPTCNENNGCCDADATCT 360
DB 301 OHQCVKQKCPENSGCFRHLDEREECKCLNLYKQEGDKCVENPPTCNENNGCCDADATCT 360
QY 361 BEDSGSSRRKKTCTECTKPDSPYPLFDGIFCSS 391
DB 361 BEDSGSSRRKKTCTECTKPDSPYPLFDGIFCSS 391

RESULT 2

US-10-057-531A-3
; Sequence 3, Application US/10057531A
; Patent No. 6855322
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
; TITLE OF INVENTION: Protein-142 Vaccine
; FILE REFERENCE: 003/241/SAP
; CURRENT APPLICATION NUMBER: US/10/057,531A
; PRIOR FILING DATE: 2002-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Apple Macintosh Microsoft Word 6.0
; SEQ ID NO 3
; LENGTH: 393
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein
; OTHER INFORMATION: Sequence in pET42A
; Patent No. 6855322
US-10-057-531A-3

Query Match 99.2%; Score 2055; DB 2; Length 393;
Best Local Similarity 99.2%; Pred. No. 9.6e-148;
Matches 390; Conservative 0; Mismatches 1; Indels 2; Gaps 1;

QY 1 MAHHHHHPGGS-GSGTMAISVTMDNIIISGFENEYDVIYKPLAGVYRSLSKKQIEKNIF 58
DB 1 MAHHHHHPGGSIEGRGTMAISVTMDNIIISGFENEYDVIYKPLAGVYRSLSKKQIEKNIF 60
QY 59 TENLNLDIILNSRLKKRYKFLDVLESIMQFKHISNEEYIIEDSKLINSBQKNTLLKSY 118
DB 61 TENLNLDIILNSRLKKRYKFLDVLESIMQFKHISNEEYIIEDSKLINSBQKNTLLKSY 120
QY 119 KYIKESVENDIKFAQEGISYEKVLAKYKDLDESIIKVIKEKEKFPSSPPTTPSPAKT 178
DB 121 KYIKESVENDIKFAQEGISYEKVLAKYKDLDESIIKVIKEKEKFPSSPPTTPSPAKT 180
QY 179 DBQKESKFLPLTNIETLYNNLVNKIDYILNLAKAKINDCNVEKDEAHVKTITKLSDLKA 238
DB 181 DBQKESKFLPLTNIETLYNNLVNKIDYILNLAKAKINDCNVEKDEAHVKTITKLSDLKA 240
QY 239 IDDKTDLFKNPVDFAIKKLINDDTKDKMLGKLSTGLVQNFPTIISKLEGRFQDMLN 298
DB 241 IDDKTDLFKNPVDFAIKKLINDDTKDKMLGKLSTGLVQNFPTIISKLEGRFQDMLN 300
QY 299 ISOHCVKKQCPENSGCFRHLDEREECKCLNLYKQEGDKCVENPPTCNENNGCCDADAT 358
DB 301 ISOHCVKKQCPENSGCFRHLDEREECKCLNLYKQEGDKCVENPPTCNENNGCCDADAT 360
QY 359 CTEEDSGSSRRKKTCTECTKPDSPYPLFDGIFCSS 391
DB 361 CTEEDSGSSRRKKTCTECTKPDSPYPLFDGIFCSS 393

RESULT 3
US-10-057-531A-2
; Sequence 2, Application US/10057531A

; Patent No. 6855322
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
; TITLE OF INVENTION: Protein-142 Vaccine
; FILE REFERENCE: 003/241/SAP
; CURRENT APPLICATION NUMBER: US/10/057,531A
; PRIOR FILING DATE: 2002-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Apple Macintosh Microsoft Word 6.0
; SEQ ID NO 2
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein
; OTHER INFORMATION: Sequence in pET150/MSP1-42
; Patent No. 6855322
US-10-057-531A-2

Query Match 97.0%; Score 2008.5; DB 2; Length 431;
Best Local Similarity 89.5%; Pred. No. 3.6e-144;
Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;

QY 3 HHHHHHPGGS-----GSGTMAISV 21
DB 2 HHHHHHPGGSGLVPRSGMKETAARKFERQHMDSPLGTDDDDKAMADIGSIEGRGTMAISV 61
QY 22 TMDNIIISGFENEYDVIYKPLAGVYRSLSKKQIEKNIFTFNLDIILNSRLKKRYFLDV 81
DB 62 TMDNIIISGFENEYDVIYKPLAGVYRSLSKKQIEKNIFTFNLDIILNSRLKKRYFLDV 121
QY 82 LESDLMQFKHISNEEYIIEDSKLINSBQKNTLLKSYKYIKESVENDIKFAQEGISYEK 141
DB 122 LESDLMQFKHISNEEYIIEDSKLINSBQKNTLLKSYKYIKESVENDIKFAQEGISYEK 181
QY 142 VLAKYKDLDESIIKVIKEKEKFPSSPPTTPSPAKTDEQKESKFLPLTNIETLYNNL 201
DB 182 VLAKYKDLDESIIKVIKEKEKFPSSPPTTPSPAKTDEQKESKFLPLTNIETLYNNL 241
QY 202 VNKIDYILNLAKAKINDCNVEKDEAHVKTITKLSDLKAIDDKTDLFKNPYDFAIKKLIND 261
DB 242 VNKIDYILNLAKAKINDCNVEKDEAHVKTITKLSDLKAIDDKTDLFKNPYDFAIKKLIND 301
QY 262 DTKDKMLGKLSTGLVQNFPTIISKLEGRFQDMLNISOHCVKKQCPENSGCFRHLDE 321
DB 302 DTKDKMLGKLSTGLVQNFPTIISKLEGRFQDMLNISOHCVKKQCPENSGCFRHLDE 361
QY 322 REECKCLNLYKQEGDKCVENPPTCNENNGCCDADATCTEEDSGSSRRKKTCTECTKPD 381
DB 362 REECKCLNLYKQEGDKCVENPPTCNENNGCCDADATCTEEDSGSSRRKKTCTECTKPD 421
QY 382 PLFDGIFCSS 391
DB 422 PLFDGIFCSS 431

RESULT 4
US-10-057-531A-1
; Sequence 1, Application US/10057531A
; Patent No. 6855322
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
; FILE REFERENCE: 003/241/SAP
; CURRENT APPLICATION NUMBER: US/10/057,531A

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.; CURRENT FILING DATE: 2002-01-25
.; PRIOR APPLICATION NUMBER: US 60/264,535
.; PRIOR FILING DATE: 2001-01-26
.; PRIOR APPLICATION NUMBER: US 60/347,564
.; PRIOR FILING DATE: 2001-10-26
.; NUMBER OF SEQ ID NOS: 12
.; SOFTWARE: Apple Macintosh Microsoft Word 6.0
.; SEQ ID NO 1
.; LENGTH: 546
.; TYPE: PRT
.; ORGANISM: Artificial sequence
.; FEATURE:
.; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein
.; Patent No. 6855322
US-10-057-531A-1
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Query Match          97.0%; Score 2008.5; DB 2; Length 546;
Best Local Similarity 89.5%; Pred. No. 4,9e-144;
Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;
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QY 3 HHHHHHPCG-----SSGCTMAISV 21
DB 117 HHHHHSSGLVPRGSGMKETAAKFERQHMDSPDGLGTDDDKAMADIGSIEGRGTMAISV 176
QY 22 TMDNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFFTNLNLNDILNSRLKKRYFLDV 81
DB 177 TMDNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFFTNLNLNDILNSRLKKRYFLDV 236
QY 82 LESDLMQFKHISSENYIIEDSFKLNSQKNTLLSKYIKESVENDIKFAQEGISYEEK 141
DB 237 LESDLMQFKHISSENYIIEDSFKLNSQKNTLLSKYIKESVENDIKFAQEGISYEEK 296
QY 142 VLAKYKDLSEIKKYIKEREKFPSSPTTPSPAKTDEQKESKFLPLTNIEFLNNL 201
DB 297 VLAKYKDLSEIKKYIKEREKFPSSPTTPSPAKTDEQKESKFLPLTNIEFLNNL 356
QY 202 VNKIDYVILNFKAKINDCNVEKDEAHVKITKLSDLKAIIDDKIDLFPKNPYDFAIKLND 261
DB 357 VNKIDYVILNFKAKINDCNVEKDEAHVKITKLSDLKAIIDDKIDLFPKNPYDFAIKLND 416
QY 262 DTKKDMLGKLLSTGLVQNFPTTIISKLIEGKFQDMNLISQHCVKQCCPENSRCFRHLD 321
DB 417 DTKKDMLGKLLSTGLVQNFPTTIISKLIEGKFQDMNLISQHCVKQCCPENSRCFRHLD 476
QY 322 REECKCLINYQEGDKCVENPNPTNENNGGCDADATCTEEDSGSSRKKTICECTKPSY 381
DB 477 REECKCLINYQEGDKCVENPNPTNENNGGCDADATCTEEDSGSSRKKTICECTKPSY 536
QY 382 PLFDGIFCSS 391
DB 537 PLFDGIFCSS 546
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```
RESULT 5
US-09-710-000-8
.; Sequence 8, Application US/09710000
.; Patent No. 6660498
.; GENERAL INFORMATION:
.; APPLICANT: Hui, George, S.N.
.; APPLICANT: Ho, Walter K.K.
.; APPLICANT: Lap-Yin, Pang
.; TITLE OF INVENTION: Malaria Vaccine
.; FILE REFERENCE: 23461-2001100
.; CURRENT APPLICATION NUMBER: US/09/710,000
.; PRIOR FILING DATE: 2000-11-10
.; PRIOR APPLICATION NUMBER: 60/226,861
.; PRIOR FILING DATE: 2000-08-22
.; PRIOR APPLICATION NUMBER: 60/165,178
.; PRIOR FILING DATE: 1999-11-12
.; PRIOR APPLICATION NUMBER: 60/168,327
.; PRIOR FILING DATE: 1999-12-11
.; NUMBER OF SEQ ID NOS: 11
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.; SOFTWARE: FastSeq for Windows Version 4.0
.; SEQ ID NO 8
.; LENGTH: 375
.; TYPE: PRT
.; ORGANISM: Unknown
.; FEATURE:
.; OTHER INFORMATION: amino acid sequence of PfMSP-142
US-09-710-000-8
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Query Match          95.1%; Score 1970; DB 2; Length 375;
Best Local Similarity 100.0%; Pred. No. 2.5e-141;
Matches 375; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY 17 MAISTVMNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFFTNLNLNDILNSRLKKRK 76
DB 1 MAISTVMNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFFTNLNLNDILNSRLKKRK 60
QY 77 YFLDVLBSDLMOFKHISSENYIIEDSFKLNSQKNTLLSKYIKESVENDIKFAQEGI 136
DB 61 YFLDVLBSDLMOFKHISSENYIIEDSFKLNSQKNTLLSKYIKESVENDIKFAQEGI 120
QY 137 SYEKVLAKYKDLSEIKKYIKEREKFPSSPTTPSPAKTDEQKESKFLPLTNIEFL 196
DB 121 SYEKVLAKYKDLSEIKKYIKEREKFPSSPTTPSPAKTDEQKESKFLPLTNIEFL 180
QY 197 LNNLNLNKIDYVILNFKAKINDCNVEKDEAHVKITKLSDLKAIIDDKIDLFPKNPYDFAIK 256
DB 181 LNNLNLNKIDYVILNFKAKINDCNVEKDEAHVKITKLSDLKAIIDDKIDLFPKNPYDFAIK 240
QY 257 KLINDTYKDMLGKLLSTGLVQNFPTTIISKLIEGKFQDMNLISQHCVKQCCPENSRCF 316
DB 241 KLINDTYKDMLGKLLSTGLVQNFPTTIISKLIEGKFQDMNLISQHCVKQCCPENSRCF 300
QY 317 RHLDERECKCLINYQEGDKCVENPNPTNENNGGCDADATCTEEDSGSSRKKTICECT 376
DB 301 RHLDERECKCLINYQEGDKCVENPNPTNENNGGCDADATCTEEDSGSSRKKTICECT 360
QY 377 KPDSYPLFDGIFCSS 391
DB 361 KPDSYPLFDGIFCSS 375
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RESULT 6
US-10-057-531A-5
.; Sequence 5, Application US/10057531A
.; Patent No. 6855322
.; GENERAL INFORMATION:
.; APPLICANT: Lyon, Jeffrey A.
.; APPLICANT: Angov, Evelina
.; TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
.; FILE REFERENCE: 003/241/SAP
.; CURRENT APPLICATION NUMBER: US/10/057,531A
.; PRIOR FILING DATE: 2002-01-25
.; PRIOR APPLICATION NUMBER: US 60/264,535
.; PRIOR FILING DATE: 2001-01-26
.; PRIOR APPLICATION NUMBER: US 60/347,564
.; PRIOR FILING DATE: 2001-10-26
.; NUMBER OF SEQ ID NOS: 12
.; SOFTWARE: Apple Macintosh Microsoft Word 6.0
.; SEQ ID NO 5
.; LENGTH: 383
.; TYPE: PRT
.; ORGANISM: Plasmodium falciparum 3D7 MSP142
US-10-057-531A-5
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Query Match          95.0%; Score 1968; DB 2; Length 383;
Best Local Similarity 99.2%; Pred. No. 3.6e-141;
Matches 376; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
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QY 13 GSGTMAISVTMDNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFFTNLNLNDILNSRL 72
DB 5 GSGTMAISVTMDNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFFTNLNLNDILNSRL 64
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QY 73 KKKRYFLDVLESDDLMOFKHISSENEYIIEDSPFLNSQKNTLLKSKYKIKESVENDIKFA 132
DB 65 KKKRYFLDVLESDDLMOFKHISSENEYIIEDSPFLNSQKNTLLKSKYKIKESVENDIKFA 124
QY 133 QEGISYSEKVLAKYKODLESIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLT 192
DB 125 QEGISYSEKVLAKYKODLESIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLT 184
QY 193 NIETLYNNLVNKIDYLLNLKAKINDCNVEKDEAHVKITKLSDLKAIDKIDLFKNPYDF 252
DB 185 NIETLYNNLVNKIDYLLNLKAKINDCNVEKDEAHVKITKLSDLKAIDKIDLFKNPYDF 244
QY 253 EAIKKLINDTKKMDLGLSTGLVQNFNTIISKLEBGFQDMLNISQHCYKQCPEN 312
DB 245 EAIKKLINDTKKMDLGLSTGLVQNFNTIISKLEBGFQDMLNISQHCYKQCPEN 304
QY 313 SGCFRHLDEREBCCKLLNYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSRKKIT 372
DB 305 SGCFRHLDEREBCCKLLNYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSRKKIT 364
QY 373 CECTKPDYPLFDGIFCSS 391
DB 365 CECTKPDYPLFDGIFCSS 383

RESULT 7

US-08-195-705-2
Sequence 2, Application US/08195705
Patent No. 6420523

GENERAL INFORMATION:

APPLICANT: Chang, Sandra
APPLICANT: Hui, George
APPLICANT: Barr, Philip
APPLICANT: Gibson, Helen
TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: David Hoxie Patchfull Hapgood
STREET: 45 Rockefeller Pl.
CITY: New York
STATE: N.Y.
COUNTRY: USA
ZIP: 10111

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/195,705
FILING DATE: 14-FEB-1994
CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Jacobs, Seth H
REGISTRATION NUMBER: 32140
REFERENCE/DOCKET NUMBER: 1188043
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-757-2200
TELEFAX: 212-586-1461

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 394 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

HYPOTHETICAL: NO

ANTI-SENSE: NO

FRAGMENT TYPE: C-terminal

ORIGINAL SOURCE: Plasmodium falciparum

STRAIN: falciparum uganda palo alto (FUP)

US-08-195-705-2

Query Match 93.2%; Score 1931; DB 2; Length 394;

Best Local Similarity 98.7%; Pred. No. 2,4e-138;

Matches 369; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 18 AISTVMNIIISGFENEYDVIYLRKPLAGYRSLKKQIEKNITFTFNLNDILNSRLKKRY 77
DB 1 AISTVMNIIISGFENEYDVIYLRKPLAGYRSLKKQIEKNITFTFNLNDILNSRLKKRY 60
QY 78 FLVDLESDDLMOFKHISSENEYIIEDSPFLNSQKNTLLKSKYKIKESVENDIKFAQEGIS 137
DB 61 FLVDLESDDLMOFKHISSENEYIIEDSPFLNSQKNTLLKSKYKIKESVENDIKFAQEGIS 120
QY 138 YYEKVLAKYKODLESIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLTNIETL 197
DB 121 YYEKVLAKYKODLESIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLTNIETL 180
QY 198 YNNLVNKKIDYLLNLKAKINDCNVEKDEAHVKITKLSDLKAIDKIDLFKNPYDFEAIKK 257
DB 181 YNNLVNKKIDYLLNLKAKINDCNVEKDEAHVKITKLSDLKAIDKIDLFKNPYDFEAIKK 240
QY 258 LINDTKKMDLGLSTGLVQNFNTIISKLEBGFQDMLNISQHCYKQCPENSGCFR 317
DB 241 LINDTKKMDLGLSTGLVQNFNTIISKLEBGFQDMLNISQHCYKQCPENSGCFR 300
QY 318 HLDEREBCCKLLNYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSRKKITCECTK 377
DB 301 HLDEREBCCKLLNYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSRKKITCECTK 360
QY 378 PDSYPLFDGIFCSS 391
DB 361 PDSYPLFDGIFCSS 374

RESULT 8

US-09-500-376-2
Sequence 2, Application US/09500376
Patent No. 685316

GENERAL INFORMATION:

APPLICANT: University of Hawaii
TITLE OF INVENTION: Baculovirus Produced Plasmodium falciparum Vaccine
FILE REFERENCE: A-67984
CURRENT APPLICATION NUMBER: US/09/500,376
CURRENT FILING DATE: 2000-02-08
PRIOR FILING DATE: 1994-02-14
PRIOR APPLICATION NUMBER: US 08/195,705
NUMBER OF SEQ ID NOS: 16
SOFTWARE: Patentin version 3.1
SEQ ID NO 2
LENGTH: 394
TYPE: PRT
ORGANISM: Plasmodium falciparum
US-09-500-376-2

Query Match 93.2%; Score 1931; DB 2; Length 394;

Best Local Similarity 98.7%; Pred. No. 2,4e-138;

Matches 369; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 18 AISTVMNIIISGFENEYDVIYLRKPLAGYRSLKKQIEKNITFTFNLNDILNSRLKKRY 77
DB 1 AISTVMNIIISGFENEYDVIYLRKPLAGYRSLKKQIEKNITFTFNLNDILNSRLKKRY 60
QY 78 FLVDLESDDLMOFKHISSENEYIIEDSPFLNSQKNTLLKSKYKIKESVENDIKFAQEGIS 137
DB 61 FLVDLESDDLMOFKHISSENEYIIEDSPFLNSQKNTLLKSKYKIKESVENDIKFAQEGIS 120
QY 138 YYEKVLAKYKODLESIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLTNIETL 197
DB 121 YYEKVLAKYKODLESIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLTNIETL 180
QY 198 YNNLVNKKIDYLLNLKAKINDCNVEKDEAHVKITKLSDLKAIDKIDLFKNPYDFEAIKK 257

Db 181 YNNLVNKLIDYILNKKAKINDCNVEKDEAHVKITKLSDLKAIIDKIDLFKNNDPEALIKK 240
Qy 258 LINDTKKDMGLKLGSTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPENSGCFR 317
Db 241 LINDTKKDMGLKLGSTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPENSGCFR 300
Qy 318 HLDREBECKCLNLYKQEGDKVENPNPTCNENNGGCDADATCTBEDSGSSRKKITCECTK 377
Db 301 HLDREBECKCLNLYKQEGDKVENPNPTCNENNGGCDADATCTBEDSGSSRKKITCECTK 360
Qy 378 PDSYPLFDGIFCSS 391
Db 361 PDSYPLFDGIFCSS 374

RESULT 9
US-09-500-376-16
; Sequence 16, Application US/09500376
; Patent No. 6855316
; GENERAL INFORMATION:
; APPLICANT: University of Hawaii
; TITLE OF INVENTION: Baculovirus Produced Plasmodium falciparum Vaccine
; FILE REFERENCE: A-67984
; CURRENT APPLICATION NUMBER: US/09/500,376
; PRIOR FILING DATE: 2000-02-08
; PRIOR APPLICATION NUMBER: US 08/195,705
; PRIOR FILING DATE: 1994-02-14
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 16
; LENGTH: 402
; TYPE: PRT
; ORGANISM: Plasmodium falciparum
US-09-500-376-16

Query Match 93.1%; Score 1928; DB 2; Length 402;
Best Local Similarity 98.1%; Pred. No. 4, 1e-138;
Matches 368; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

Qy 16 TMAISVTMDNLTSGFENEYDVIYLLKPLAGVYRSLLKKQIEKNIFTFNLNLDILNSRLKKR 75
Db 20 TMAISVTMDNLTSGFENEYDVIYLLKPLAGVYRSLLKKQIEKNIFTFNLNLDILNSRLKKR 79
Qy 76 KYFLDVLSEDLMOQFQHISSENYIIDSFKLNSSEQKNTLLSKYKIKESVENDIKFAQEG 135
Db 80 KYFLDVLSEDLMOQFQHISSENYIIDSFKLNSSEQKNTLLSKYKIKESVENDIKFAQEG 139
Qy 136 ISYEKVLAKYKDDLESIKKVIKEEKEKPPSPPTTPPSPAKTDEOKKESKFLPLNTNIE 195
Db 140 ISYEKVLAKYKDDLESIKKVIKEEKEKPPSPPTTPPSPAKTDEOKKESKFLPLNTNIE 199
Qy 196 TLVNNLVNKIDYILNKKAKINDCNVEKDEAHVKITKLSDLKAIIDKIDLFKNPYDEALIKK 255
Db 200 TLVNNLVNKIDYILNKKAKINDCNVEKDEAHVKITKLSDLKAIIDKIDLFKNHNDPAIKK 259
Qy 256 KKLINDTKKDMGLKLGSTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPENSGCFR 315
Db 260 KKLINDTKKDMGLKLGSTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPENSGCFR 319
Qy 316 FRLHDERBECKCLNLYKQEGDKVENPNPTCNENNGGCDADATCTBEDSGSSRKKITCECTK 375
Db 320 FRLHDERBECKCLNLYKQEGDKVENPNPTCNENNGGCDADATCTBEDSGSSRKKITCECTK 379
Qy 376 TKPDSYPLFDGIFCSS 390
Db 380 TKPDSYPLFDGIFCSS 394

RESULT 10
US-08-195-705-4
; Sequence 4, Application US/08195705
; Patent No. 6420523

GENERAL INFORMATION:
; APPLICANT: Chang, Sandra
; APPLICANT: Hui, George
; APPLICANT: Bart, Philip
; APPLICANT: Gibson, Helen
; TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESS: Davis Hoxie Faithfull Hapgood
; STREET: 45 Rockefeller Pl.
; CITY: New York
; STATE: N.Y.
; COUNTRY: USA
; ZIP: 10111
COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/195,705
; FILING DATE: 14-FEB-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Jacobs, Seth H
; REGISTRATION NUMBER: 32140
; REFERENCE/DOCKET NUMBER: 11880A3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 212-586-1461
; TELEFAX: 212-757-2200
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 394 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Plasmodium falciparum
; STRAIN: MAD
US-08-195-705-4

Query Match 92.8%; Score 1921; DB 2; Length 394;
Best Local Similarity 98.4%; Pred. No. 1, 4e-137;
Matches 368; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 18 AISTVTMDNLTSGFENEYDVIYLLKPLAGVYRSLLKKQIEKNIFTFNLNLDILNSRLKKRY 77
Db 1 AISTVTMDNLTSGFENEYDVIYLLKPLAGVYRSLLKKQIEKNIFTFNLNLDILNSRLKKRY 60
Qy 78 FLVDLESDLMOQFQHISSENYIIDSFKLNSSEQKNTLLSKYKIKESVENDIKFAQEGIS 137
Db 61 FLVDLESDLMOQFQHISSENYIIDSFKLNSSEQKNTLLSKYKIKESVENDIKFAQEGIS 120
Qy 138 YYEKVLAKYKDDLESIKKVIKEEKEKPPSPPTTPPSPAKTDEOKKESKFLPLNTNIE 197
Db 121 YYEKVLAKYKDDLESIKKVIKEEKEKPPSPPTTPPSPAKTDEOKKESKFLPLNTNIE 180
Qy 198 YNNLVNKLIDYILNKKAKINDCNVEKDEAHVKITKLSDLKAIIDKIDLFKNPYDEALIKK 257
Db 181 YNNLVNKLIDYILNKKAKINDCNVEKDEAHVKITKLSDLKAIIDKIDLFKNNDPEALIKK 240
Qy 258 LINDTKKDMGLKLGSTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPENSGCFR 317
Db 241 LINDTKKDMGLKLGSTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPENSGCFR 300
Qy 318 HLDREBECKCLNLYKQEGDKVENPNPTCNENNGGCDADATCTBEDSGSSRKKITCECTK 377
Db 301 HLDREBECKCLNLYKQEGDKVENPNPTCNENNGGCDADATCTBEDSGSSRKKITCECTK 360

QY	378	PDSYPLFDGIFCSS	391
Db	361	PDSYPLFDGIFCSS	374

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RESULT 11
US-09-500-376-3
; Sequence 3, Application US/09500376
; Patent No. 685316
; GENERAL INFORMATION:
; APPLICANT: University of Hawaii
; TITLE OF INVENTION: Baculovirus Produced Plasmodium Falciparum Vaccine
; FILE REFERENCE: A-67984
; CURRENT APPLICATION NUMBER: US/09/500.376
; CURRENT FILING DATE: 2000-02-08
; PRIOR APPLICATION NUMBER: US 08/195,705
; PRIOR FILING DATE: 1994-02-14
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 394
; TYPE: PRT
; ORGANISM: plasmodium falciparum
; US-09-500-376-3

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Query Match	92.8%	Score 1921;	DB 2;	Length 394;
Best Local Similarity	98.4%;	Pred. No. 1.4e-137;		
Matches 368;	Conservative	0;	Mismatches 6;	Indels 0;
				Gaps 0

Qy	18	ISVYMDNILSFEENEVDIYILKPLAGVRSLEKQJIEKNIPTFNLMNDLNSRLKRRY	77
Db	1	AI5VTMDNILSFEENEVDIYILKPLAGVRSLEKQJIEKNIITNLMNDLNSRLKRRY	60
Qy	78	FLDVLSEDLMOFKHLSNNEYIIEDSFKLNSQKNTLLKSYYKIKESVENDIKFAQEGIS	137
Db	61	FLDVLSEDLMOFKHLSNNEYIIEDSPKLNLSQKNTLLKSYYKIKESVENDIKFAQEGIS	120
Qy	138	YYEKTLYAKYKODLSEIKKYIKEEKEKFPSSPPTPPSPAKTDEQKESKLPPLTNIETL	197
Db	121	YYEKTLYAKYKODLSEIKKYIKEEKEKFPSSPPTPPSPAKTDEQKESKLPPLTNIETL	180
Qy	198	YNNLVNKLIDDYILNIAKINDCNVEKDEAHVITKLSDAIDDKIDLFPNPAVDFAIRK	257
Db	181	YNNLVNKLIDDYILNIAKINDCNVEKDEAHVITKLSDAIDDKIDLFPNTNIDFAIRK	240
Qy	258	LINDPTKDMLGKLTSTGLVQNFPTNIIISKLTIEGKQDMNLNISQHCYVKQCPENSGCFR	317
Db	241	LINDPTKDMLGKLTSTGLVQIFPNTIISKLTIEGKQDMNLNISQHCYVKQCPENSGCFR	300
Qy	318	HLDBEECKCLILNYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKITTCECTK	377
Db	301	HLDBEECKCLILNYKQEGDKCEENPNPTCNENNGCCDADATCTEEDSGSSRRKITTCECTK	360
Qy	378	PDSYPLFDGIFCSS 391	
Db	361	PDSYPLFDGIFCSS 374	

RESULT 12
US-09-117-415B-22
Sequence 22, Application US/09117415B
Patent No. 6551586
GENERAL INFORMATION:
APPLICANT: Davidson, Eugene
Yang, Shuting
TITLE OF INVENTION: Malaria Vaccine Based Upon the Addition
of a MSAL Peptide
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Henry D. Coleman, COLEMAN SUDOL SAPONE, PC
STREET: 714 Colorado Avenue
CITY: Bridgeport
STATE: Connecticut

COUNTRY: USA
 ZIP: 10017
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Wordpad (ASCII)
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/117,415B
 FILING DATE: 29-Jul-1998
 CLASSIFICATION: 435
 ATTORNEY/AGENT INFORMATION:
 NAME: Coleman, Henry D.
 REGISTRATION NUMBER: 32, 559
 REFERENCE/DOCKET NUMBER: R12-030
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (212) 679-0090
 TELEFAX: (212) 679-9121
 INFORMATION FOR SEQ ID NO: 22:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 613 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 SEQUENCE DESCRIPTION: SEQ ID NO: 22:
 US-09-117-415B-22

Query Match	56.3%	Score 1166.5	DB 2	Length 613
Best Local Similarity	58.0%	Pred. No. 3.6e-80		
Matches 220	Conservative 55	Mismatches 83	Indels 21	Gaps 2

Qy	14	SGMAISWTMDNIIISGENEYDVLYLPLAGVYSRLKKQIEKNITFPMLINDIINSLRLK	73
Db	253	TGEAVTSVIDNIIISKIENEYEVLYLPLAGVYSRLKKQIENNVWTFVAVYKDIINLSRFN	312
Qy	74	KRKYFLDVLESIDLMOFKHIISSNEYIIEBDSFKLINSBOKNTLLSKYKIKESVENDIKFAQ	133
Db	313	KRENFKNVLBSDLLPYKDLTSSNVVXDOPYKFLNKEKDKFLSSVNYIKDSIDTDINFAN	372
Qy	134	EGISYIEYKVLAKYKDDLESIKKVIKEEKKEFPSSPPTTPBPAPAKTDEOKSESKEPLLTN	193
Db	373	DVLGYKXILSEKYSKSDSDSIKKYI-----NDKOGENEKLYPLFLNN	412
Qy	194	IETLYNNLVNKTIDYLLNLKAKINDCNVEKDEAHKYITKLSDLKIDDKIDFLFKRYPPE	253
Db	413	IETLYKVNDDIKDLPVHLHLEAKVNLAYYEKSNVEYKIKELNYLKTIIQKTLADFKKONNFV	472
Qy	254	AIKKLINDDTKDMGLKSLTGLV-ONEPNTIISKLLEGKODMLNISOHQCVKKOCEBN	312
Db	473	GIADLSTDYNNNNLLTKFLSTGWFENLAKTVLSTLLDGNIGMNLNISOHQCVKKOCPON	532
Qy	313	SGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNNGCDADATCTIEBDSGSSRKIT	372
Db	533	SGCFRHLDEREECKCLLNYKQEGDKCVENPNPTCNENNNGCDADAKCTIEBDSGSSNGKIT	592
Qy	373	CECTKPDSPYLPFDGIFCSS 391	
Db	593	CECTKPDSPYLPFDGIFCSS 611	

RESULT 13
US-09-117-415B-18
Sequence 18, Application US/09117415B
Patent No. 6551586
GENERAL INFORMATION:
APPLICANT: Davidson, Eugene
Yang, Shutong
TITLE OF INVENTION: Malaria Vaccine Based Upon the Addition
of a MSA1 Peptide
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Henry D. Coleman, COLEMAN SUDOL SAPONE, PC
STREET: 714 Colorado Avenue

CITY: Bridgeport
STATE: Connecticut
COUNTRY: USA
ZIP: 10017
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Wordpad (ASCII)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/117,415B
FILING DATE: 29-Jul-1998
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Coleman, Henry D.
REGISTRATION NUMBER: 32,559
REFERENCE/DOCKET NUMBER: R12-030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 679-9121
TELEFAX: (212) 679-0090
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 631 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-09-117-415B-18

Query Match 56.3%; Score 1166.5; DB 2; Length 631;
Best Local Similarity 58.0%; Pred. No. 3.7e-80;
Matches 220; Conservative 55; Mismatches 83; Indels 21; Gaps 2;
QY 14 SGTMAISTMTNIIISGFENEVDVYLKPLAGYRSLSKKQIEKNITFTPLNLNDILNSRLK 73
DB 271 TGEAVTPSVINDIILSKIENEYEVLYLKLPLAGYRSLSKKQLENNVWTFVNVNVDILNSRFN 330
QY 74 KRKYFLDVESDLDMQFKHISSENEYIEDSFKLINSEOKNTLLSKYKIKESVENDIKRPAQ 133
DB 331 KRENKVNLESDDLPIYKDLTSSNVVVDPKYFLNKEKDKFLSSYNYIKDSIDTDINFRAN 390
QY 134 EGISYEKVLAKYKDDLESIKKVIKEEKEKPPSPPTTPSPAKTDEOKESKFLPLTLN 193
DB 391 DVLGYIKLSKYSKSDLSIKKYI-----NDKGGENKELYPLPLNN 430
QY 194 IETLYNNLVNKIDVLYLNLKAKINDCNVEKDBAHYKTKLSDLKAIIDKIDLFKNPYDFE 253
DB 431 IETLYKTVNDKIDLFVHLEAKVNLVYTERKSNVEVKIKELNYLKTIDKLADFKNNNFV 490
QY 254 AIKKLINDTKMDLGLKLTGLV-QNFPNTIISKLIEGKFDMDLNIISOHOCVKKQCPEN 312
DB 491 GIADLSTYNNHNNLTKFLSTGMVFENLAKTVLSLLDGNLQGMNISOHOCVKKQCPON 550
QY 313 SGCPRHLDEREECKCLLNYKQEGDKCVENPNTCNENNGGCDADATCTEEDSGSRRKKT 372
DB 551 SGCPRHLDEREECKCLLNYKQEGDKCVENPNTCNENNGGCDADAKCTEEDSGSRRKKT 610
QY 373 CECTKPDSPYPLFDGIFCSS 391
DB 611 CECTKPDSPYPLFDGIFCSS 629

RESULT 14
US-09-117-415B-20
Sequence 20, Application US/09117415B
Patent No. 6551586
GENERAL INFORMATION:
APPLICANT: Davidson, Eugene
Yang, Shutong
TITLE OF INVENTION: Malaria Vaccine Based Upon the Addition
of a MSA1 Peptide
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:

ADDRESSEE: Henry D. Coleman, COLEMAN SUDOL SAPONE, PC
STREET: 714 Colorado Avenue
CITY: Bridgeport
STATE: Connecticut
COUNTRY: USA
ZIP: 10017
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Wordpad (ASCII)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/117,415B
FILING DATE: 29-Jul-1998
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Coleman, Henry D.
REGISTRATION NUMBER: 32,559
REFERENCE/DOCKET NUMBER: R12-030
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 679-0090
TELEFAX: (212) 679-9121
INFORMATION FOR SEQ ID NO: 20:
SEQUENCE CHARACTERISTICS:
LENGTH: 631 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 20:
US-09-117-415B-20

Query Match 56.3%; Score 1166.5; DB 2; Length 631;
Best Local Similarity 58.0%; Pred. No. 3.7e-80;
Matches 220; Conservative 55; Mismatches 83; Indels 21; Gaps 2;
QY 14 SGTMAISTMTNIIISGFENEVDVYLKPLAGYRSLSKKQIEKNITFTPLNLNDILNSRLK 73
DB 253 TGEAVTPSVINDIILSKIENEYEVLYLKLPLAGYRSLSKKQLENNVWTFVNVNVDILNSRFN 312
QY 74 KRKYFLDVESDLDMQFKHISSENEYIEDSFKLINSEOKNTLLSKYKIKESVENDIKRPAQ 133
DB 313 KRENKVNLESDDLPIYKDLTSSNVVVDPKYFLNKEKDKFLSSYNYIKDSIDTDINFRAN 372
QY 134 EGISYEKVLAKYKDDLESIKKVIKEEKEKPPSPPTTPSPAKTDEOKESKFLPLTLN 193
DB 373 DVLGYIKLSKYSKSDLSIKKYI-----NDKGGENKELYPLPLNN 412
QY 194 IETLYNNLVNKIDVLYLNLKAKINDCNVEKDBAHYKTKLSDLKAIIDKIDLFKNPYDFE 253
DB 413 IETLYKTVNDKIDLFVHLEAKVNLVYTERKSNVEVKIKELNYLKTIDKLADFKNNNFV 472
QY 254 AIKKLINDTKMDLGLKLTGLV-QNFPNTIISKLIEGKFDMDLNIISOHOCVKKQCPEN 312
DB 473 GIADLSTYNNHNNLTKFLSTGMVFENLAKTVLSLLDGNLQGMNISOHOCVKKQCPON 532
QY 313 SGCPRHLDEREECKCLLNYKQEGDKCVENPNTCNENNGGCDADATCTEEDSGSRRKKT 372
DB 533 SGCPRHLDEREECKCLLNYKQEGDKCVENPNTCNENNGGCDADAKCTEEDSGSRRKKT 592
QY 373 CECTKPDSPYPLFDGIFCSS 391
DB 593 CECTKPDSPYPLFDGIFCSS 611

RESULT 15
US-09-117-415B-16
Sequence 16, Application US/09117415B
Patent No. 6551586
GENERAL INFORMATION:
APPLICANT: Davidson, Eugene
Yang, Shutong
TITLE OF INVENTION: Malaria Vaccine Based Upon the Addition
of a MSA1 Peptide

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Query Match	56.3%	Score 1166.5	DB 2	Length 649
Best Local Similarity	58.0%	Pred. No. 3	8e-80	
Matches	220	Conservative	55	Mismatches 83
				Indels 21
				Gaps 2
QY	14	SGTMAISVMTDNIIISGFENEYDVIIYKPLAGVRSIAKKQIEKQIFTFNINIDINSRLK	73	
DB	271	TGEAVTPSVINILSKINEYEVLLKPLAGVRSIAKKQLENNVMTFNVVNDIINSREN	330	
QY	74	KRYKFLVDLSEDMQFKHISSENYEIIEDSFKLINSEOKTTLKSYKIKESVENDIKPQ	133	
DB	331	KRENFKNVLESDDLPPKDLTSSNYVAKDPYKFLNEKKRDKFLSSYNYIDSDITDINFEFN	390	
QY	134	EGISYVEKVALAKYKDLESIKKIVIEEKEKFPSPBPPTTPEPAKDEOKKESKFLPFLTN	193	
DB	391	DVLGGYKTLSEKYSKSDLDISIKKI-----NDKGENSENKYLPFLPLNN	430	
QY	194	IETLYNNLVNKIIDYILNKKAKINDCNVEKDEAHAYKITLSDLKAIIDDKILFKNPYDPE	253	
DB	431	IETLYKYTVNDIIDLFPVHLEAKVLNYYTEKSNVEYKIKELNLTAKTIODLDAFKKNNFV	490	
QY	254	AIKYLINDTKKMDYMGKLSGLV--QNPENTIIISKLIESEKFPQDMNISOHCVCVKQCPEN	312	
DB	491	GIADLSTDYNNHNNLTTKFLSTGMVENVNLAKTVLSNLDGNSLQGMNISOHCVCVKQCPON	550	
QY	313	SGCFRHLDEREECKCLNLYKQEGDKCVENPNPTCNENNGCCADATCTEEDSGSSRKIT	372	
DB	551	SGCFRHLDEREECKCLNLYKQEGDKCVENPNPTCNENNGCCADAKCTEEDSGSNGKIT	610	
QY	373	CECTKPDSPYLPFDGIFCSS	391	
DB	611	CECTKPDSPYLPFDGIFCSS	629	

Search completed: May 5, 2006, 00:26:11
Job time : 48 secs

GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 00:20:52 ; Search time 40 Seconds
(without alignments)
940.519 Million cell updates/sec

Title: US-10-057-532a-7
Perfect score: 2071
Sequence: 1 MAHHHHHGGSGGSGTMAIS.....TCECTKPDSPYPLFDGFCSS 391

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1942	93.8	1701	2 A54498	major merozoite su
2	1931	93.2	1726	1 SAQGM	major merozoite su
3	1921	92.8	1701	2 A26868	major merozoite su
4	1912.5	92.3	651	2 S47282	merozoite surface
5	1912	92.3	1726	2 A45948	major merozoite su
6	1166.5	56.3	400	2 A45545	major merozoite su
7	1166.5	56.3	1639	2 S05603	major merozoite su
8	1043	50.4	1631	1 SAQK1	major merozoite su
9	1003	48.4	1640	2 A24594	probable major sur
10	792	38.2	1726	2 A39401	merozoite surface
11	781	37.7	1751	2 A45604	major blood-stage
12	553.5	26.7	680	2 A28121	major merozoite su
13	553.5	26.7	1772	2 A45532	major merozoite su
14	531	25.6	1785	2 A45546	major merozoite su
15	180.5	8.7	980	2 E71606	hypothetical prote
16	166	8.0	2166	2 G70163	hypothetical prote
17	160.5	7.7	1169	2 A64505	P115 homolog - Met
18	156.5	7.6	1939	2 T18372	repeat organellar
19	154	7.4	2269	2 T28677	rhodopy protein -
20	152	7.3	2401	2 T28676	rhodopy protein -
21	150	7.2	1156	2 B70356	chromosome assembl
22	149	7.2	1191	2 B71116	conserved hypothet
23	146	7.0	2819	2 A90551	hypothetical prote
24	145	7.0	1005	2 A64465	hypothetical prote
25	145	7.0	1130	2 T34081	hypothetical prote
26	145	7.0	1188	2 A71621	protein with 5'-3'
27	144	7.0	671	2 H64502	hypothetical prote
28	144	7.0	3394	2 T18501	hypothetical prote
29	143.5	6.9	1086	2 S16752	major merozoite su

30	143.5	6.9	1619	2 T18499	hypothetical prote
31	142.5	6.9	963	2 C90535	conserved hypothet
32	142	6.9	1187	2 T18355	hypothetical prote
33	140.5	6.8	819	2 E70105	P115 protein homol
34	140.5	6.8	864	2 B90395	purine NTPase [imp
35	140	6.8	1127	2 T28317	ORF MSY156 hypoth
36	140	6.8	1712	2 C71618	hypothetical prote
37	139.5	6.7	1979	2 C71622	hypothetical prote
38	139.5	6.7	652	2 B59102	hypothetical prote
39	138.5	6.7	624	2 PC6003	surface membrane p
40	138.5	6.7	2116	2 A26855	myosin heavy chain
41	138	6.7	442	2 T18507	hypothetical prote
42	137.5	6.6	909	2 C97325	hypothetical prote
43	137.5	6.6	1250	2 E81339	probable restricti
44	136	6.6	821	2 S67087	hypothetical prote
45	136	6.6	1163	2 G97236	ATPase involved in

ALIGNMENTS

RESULT 1
A54498
Major merozoite surface antigen precursor - 'malaria parasite (Plasmodium falciparum) (isc
C:Species: Plasmodium falciparum
C:Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 31-Dec-2004
C:Accession: A54498

R:Peterson, M.G.; Coppel, R.L.; McIntyre, P.; Langford, C.J.; Woodrow, G.; Brown, G.V.; J
Kol. Biochem. Parasitol. 27, 291-302, 1988
A:Title: Variation in the precursor to the major merozoite surface antigens of Plasmodium
A:Reference number: A54498; MUID:88142999; PMID:2449612
A:Accession: A54498

A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-1701 <PRT>
A:Cross-references: UNIPROT: P13819; UNIPARC: UP1000012F631; GB:M19143; NID:G160412; PIDN:J
A:Superfamily: G surface protein
C:Keywords: Surface antigen

Query Match 93.8%; Score 1942; DB 2; Length 1701;

Best Local Similarity 99.2%; Pred. No. 1.2e-93;

Matches 371; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY	18	AISVTMDNIIISGFENEYVYIKPLAGVYRSLLKQIEKNIFTFNINLNDIINSRLKKRY	77
DB	1308	AISVTMDNIIISGFENEYVYIKPLAGVYRSLLKQIEKNITTFNINLNDIINSRLKKRY	1367
QY	78	FLDVLESDDLMOFKHISNENYIIEDSFKLNSSEKNTLKSYYIKESYENDIKFAQEGIS	137
DB	1368	FLDVLESDDLMOFKHISNENYIIEDSFKLNSSEKNTLKSYYIKESYENDIKFAQEGIS	1427
QY	138	YIEKYLAKYKDDLESIKVYIEEKKKPPSPPTTPPSAKTDEQKESKFLPLFNITEL	197
DB	1428	YIEKYLAKYKDDLESIKVYIEEKKKPPSPPTTPPSAKTDEQKESKFLPLFNITEL	1487
QY	198	YNNLVNKKIDYLLINLKAKINCNEKDEAHYKIRKLSPLKAIIDPKIDIDFKKPYDEAIKK	257
DB	1488	YNNLVNKKIDYLLINLKAKINCNEKDEAHYKIRKLSPLKAIIDPKIDIDFKKPYDEAIKK	1547
QY	258	LINDTCKMDLKGKLSLSTGLVONFPNTIISKLIIEGKFQDMLNISOHQCVKQCPENSGCFR	317
DB	1548	LINDTCKMDLKGKLSLSTGLVONFPNTIISKLIIEGKFQDMLNISOHQCVKQCPENSGCFR	1607
QY	318	HLDEREECKCLINAKQEBDKCVENPNPCENNGCCADATCTEBDSSSSKKITTCECTK	377
DB	1608	HLDEREECKCLINAKQEBDKCVENPNPCENNGCCADATCTEBDSSSSKKITTCECTK	1667
QY	378	PDSYPLFDGFCSS 391	
DB	1668	PDSYPLFDGFCSS 1681	

RESULT 2

SAZQM
major merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum) (str
N:Alternate names: 195k glycoprotein
C:Species: Plasmodium falciparum
C:Date: 30-Sep-1987 #sequence_revision 31-Mar-1991 #text_change 31-Dec-2004
C:Accession: A23386; S06361
R:Weber, J.L.; Leininger, W.M.; Lyon, J.A.
Nucleic Acids Res. 14, 3311-3323, 1986
A:Title: Variation in the gene encoding a major merozoite surface antigen of the human m
A:Reference number: A23386; MUID:86205236; PMID:3517809
A:Accession: A23386
A:Molecule type: DNA
A:Residues: 1-1104 <WEB1>
A:Cross-references: UNIPROT:P04934; UNIPARC:UPI0000174696; EMBL:X03831
R:Weber, J.L.; Sim, B.K.L.; Lyon, J.A.; Wolff, R.
Nucleic Acids Res. 16, 1206, 1988
A:Title: Merozoite surface protein sequence from the Camp strain of the human malaria pa
A:Reference number: S06361; MUID:88143999; PMID:3278296
A:Accession: S06361
A:Molecule type: DNA
A:Residues: 1104-1726 <WEB2>
A:Cross-references: UNIPARC:UPI0000174697; EMBL:X03831
C:Comment: The merozoite stages of different strains have strain-specific surface antigen
C:Comment: P. falciparum has three stages: sporozoite, merozoite, and gametocyte. The me
C:Superfamily: G surface protein
C:Keywords: glycoprotein; merozoite; surface antigen; tandem repeat
F:1-19/Domain: signal sequence #status predicted <SIG>
F:20-1726/Product: major merozoite surface antigen #status predicted <MAT>
F:67-87, 91-96, 100-105, 109-120/Region: 3-residue repeats (S-G-T)
F:757-765/Region: 3-residue repeats (T-E-E)
F:133, 272, 501, 567, 638, 827, 839, 924, 944, 990, 1016, 1114, 1221, 1613, 1658/Binding site: carbohy

Query Match 93.2%; Score 1931; DB 1; Length 1726;
Best Local Similarity 98.7%; Pred. No. 4, 7e-93;
Matches 369; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 18 AISTVMDNILSGFENEVDVYLKPLAGYRSLLKQIEKNIFTFNLNDILNSRLKKRY 77
DB 1333 AISTVMDNILSGFENEVDVYLKPLAGYRSLLKQIEKNIFTFNLNDILNSRLKKRY 1392

QY 78 FLVDLESQDMQFKHISNEYIIEDSFKLNSQKNTLLKSYKYIKESVENDIKFAQEGIS 137
DB 1393 FLVDLESQDMQFKHISNEYIIEDSFKLNSQKNTLLKSYKYIKESVENDIKFAQEGIS 1452

QY 138 YEKVLAKYKDDLESIKKYIKESKEKFPSSPTPTPPSPAKTDEQKESKFLPFLTNITL 197
DB 1453 YEKVLAKYKDDLESIKKYIKESKEKFPSSPTPTPPSPAKTDEQKESKFLPFLTNITL 1512

QY 198 YNNLVNKKIDDYILNKKAKINCNEKDAHVKITLSDLKAIIDKIDLFKNPYDEAIKK 257
DB 1513 YNNLVNKKIDDYILNKKAKINCNEKDAHVKITLSDLKAIIDKIDLFKNPYDEAIKK 1572

QY 258 LINDTKDMQKGLSTGLVONFPPTIISKLEGFQDMNLISQHCYKQCPENSGCFR 317
DB 1573 LINDTKDMQKGLSTGLVONFPPTIISKLEGFQDMNLISQHCYKQCPENSGCFR 1632

QY 318 HLDREBECKCLINLKQEBDKCENPNPTCNENNGCCADATCTBEDSSSKKKTCECTK 377
DB 1633 HLDREBECKCLINLKQEBDKCENPNPTCNENNGCCADATCTBEDSSSKKKTCECTK 1692

QY 378 PDSYPLPFGIFCSS 391
DB 1693 PDSYPLPFGIFCSS 1706

RESULT 3
A26868
major merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum) (str
C:Species: Plasmodium falciparum
C:Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 31-Dec-2004
C:Accession: A26868
R:Tanabe, K.; Mackay, M.; Goman, M.; Scaife, J.G.
J. Mol. Biol. 195, 273-287, 1987

A:Title: Allelic dimorphism in a surface antigen gene of the malaria parasite Plasmodium
A:Reference number: A26868; MUID:88011243; PMID:3079521
A:Accession: A26868
A:Molecule type: DNA
A:Residues: 1-1701 <TAN>
A:Cross-references: UNIPARC:UPI000017778C
C:Superfamily: G surface protein
C:Keywords: surface antigen
F:1-19/Domain: signal sequence #status predicted <SIG>
F:20-1701/Product: major merozoite surface antigen #status predicted <MAT>

Query Match 92.8%; Score 1921; DB 2; Length 1701;
Best Local Similarity 98.4%; Pred. No. 1, 5e-92;
Matches 368; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

QY 18 AISTVMDNILSGFENEVDVYLKPLAGYRSLLKQIEKNIFTFNLNDILNSRLKKRY 77
DB 1308 AISTVMDNILSGFENEVDVYLKPLAGYRSLLKQIEKNIFTFNLNDILNSRLKKRY 1367

QY 78 FLVDLESQDMQFKHISNEYIIEDSFKLNSQKNTLLKSYKYIKESVENDIKFAQEGIS 137
DB 1368 FLVDLESQDMQFKHISNEYIIEDSFKLNSQKNTLLKSYKYIKESVENDIKFAQEGIS 1427

QY 138 YEKVLAKYKDDLESIKKYIKESKEKFPSSPTPTPPSPAKTDEQKESKFLPFLTNITL 197
DB 1428 YEKVLAKYKDDLESIKKYIKESKEKFPSSPTPTPPSPAKTDEQKESKFLPFLTNITL 1487

QY 198 YNNLVNKKIDDYILNKKAKINCNEKDAHVKITLSDLKAIIDKIDLFKNPYDEAIKK 257
DB 1488 YNNLVNKKIDDYILNKKAKINCNEKDAHVKITLSDLKAIIDKIDLFKNPYDEAIKK 1547

QY 258 LINDTKDMQKGLSTGLVONFPPTIISKLEGFQDMNLISQHCYKQCPENSGCFR 317
DB 1548 LINDTKDMQKGLSTGLVONFPPTIISKLEGFQDMNLISQHCYKQCPENSGCFR 1607

QY 318 HLDREBECKCLINLKQEBDKCENPNPTCNENNGCCADATCTBEDSSSKKKTCECTK 377
DB 1608 HLDREBECKCLINLKQEBDKCENPNPTCNENNGCCADATCTBEDSSSKKKTCECTK 1667

QY 378 PDSYPLPFGIFCSS 391
DB 1668 PDSYPLPFGIFCSS 1681

RESULT 4
S47282
merozoite surface antigen 1 - malaria parasite (Plasmodium falciparum) (strain RO-71) (fr
C:Species: Plasmodium falciparum
A:Variety: strain RO-71
C:Date: 06-Jan-1995 #sequence_revision 26-Jul-1996 #text_change 31-Dec-2004
C:Accession: S47282
R:Tolle, R.; Bujard, H.; Cooper, J.A.
submitted to the EMBL Data Library, July 1994
A:Description: Plasmodium falciparum: recombination within the C-terminal region of mero:
A:Reference number: S47282
A:Accession: S47282
A:Molecule type: DNA
A:Residues: 1-651 <TOL>
A:Cross-references: UNIPROT:Q25924; UNIPARC:UPI000008265F; EMBL:Z35329; NID:9535257; PID
A:Experimental source: strain RO-71
C:Superfamily: G surface protein
C:Keywords: glycoprotein; merozoite; surface antigen

Query Match 92.3%; Score 1912.5; DB 2; Length 651;
Best Local Similarity 98.1%; Pred. No. 1, 4e-92;
Matches 367; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

QY 18 AISTVMDNILSGFENEVDVYLKPLAGYRSLLKQIEKNIFTFNLNDILNSRLKKRY 77
DB 259 AISTVMDNILSGFENEVDVYLKPLAGYRSLLKQIEKNIFTFNLNDILNSRLKKRY 318

QY 78 FLVDLESQDMQFKHISNEYIIEDSFKLNSQKNTLLKSYKYIKESVENDIKFAQEGIS 137

Db 319 FLVDLESDFMOFKHISSENYIIEDESFKLINSEOKNTLLSKYKIESVENDIKFAQEGIS 378
QY 138 YVEKVLAKYKODLESIKKVIKEKEKPPSPPTTTPSPAKTDEOKKESKFLPFLNIETL 197
Db 379 YVEKVLAKYKODLESIKKVIKEKEKPPSPPTTTPSPAKTDEOKKESKFLPFLNIETL 437
QY 198 YNNLVNKIDVYLINAKINDCNVEKDEAHVYITKLSDLKAIIDKIDLFKNPYDEAIKK 257
Db 438 YNNLVNKIDVYLINAKINDCNVEKDEAHVYITKLSDLKAIIDKIDLFKNHNDFEAIKK 497
QY 258 LINDTKKMDLQKGLSTGLVONFPNTIISKLEIGKFOQMLNISQHCYKQCPQNSGCFR 317
Db 498 LINDTKKMDLQKGLSTGLVONFPNTIISKLEIGKFOQMLNISQHCYKQCPQNSGCFR 557
QY 318 HLDEREBCCLLNTYKQEGDKCVENPNPTCNENNGGCDADACTEEDSGSSRKITCECTK 377
Db 558 HLDEREBCCLLNTYKQEGDKCVENPNPTCNENNGGCDADACTEEDSGSSRKITCECTK 617
QY 378 PDSYPLFDGIFCSS 391
Db 618 PDSYPLFDGIFCSS 631

RESULT 5

A45948
major merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum) (str
C:Species: Plasmodium falciparum
C:Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C:Accession: A45948
R:Chang, S.P.; Kramer, K.J.; Yamaga, K.M.; Case, S.E.; Siddiqui, W.A.
Exp. Parasitol. 67, 1-11, 1998
A:Title: Plasmodium falciparum: gene structure and hydrophathy profile of the major merozoite
A:Reference number: A45948; MUID:89005525; PMID:3049134
A:Accession: A45948
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-1726 <CNA>
A:Cross-references: UNIPROT:Q25922; UNIPARC:UPI0000177F89; GB:M37213
C:Superfamily: G surface protein
C:Keywords: surface antigen

Query Match 92.3%; Score 1912; DB 2; Length 1726;
Best Local Similarity 97.9%; Pred. No. 4,6e-92;
Matches 366; Conservative 1; Mismatches 7; Indels 0; Gaps 0;
QY 18 AISTYMDNIIISGFENEYDVYILKPLAGYRSLSKQIEKNITFTFNILNDILNSRLKKRY 77
Db 1333 AISTYMDNIIISGFENEYDVYILKPLAGYRSLSKQIEKNITFTFNILNDILNSRLKKRY 1392
QY 78 FLVDLESDFMOFKHISSENYIIEDESFKLINSEOKNTLLSKYKIESVENDIKFAQEGIS 137
Db 1393 FLVDLESDFMOFKHISSENYIIEDESFKLINSEOKNTLLSKYKIESVENDIKFAQEGIS 1452
QY 138 YVEKVLAKYKODLESIKKVIKEKEKPPSPPTTTPSPAKTDEOKKESKFLPFLNIETL 197
Db 1453 YVEKVLAKYKODLESIKKVIKEKEKPPSPPTTTPSPAKTDEOKKESKFLPFLNIETL 1512
QY 198 YNNLVNKIDVYLINAKINDCNVEKDEAHVYITKLSDLKAIIDKIDLFKNPYDEAIKK 257
Db 1513 YNNLVNKIDVYLINAKINDCNVEKDEAHVYITKLSDLKAIIDKIDLFKNHNDFEAIKK 1572
QY 258 LINDTKKMDLQKGLSTGLVONFPNTIISKLEIGKFOQMLNISQHCYKQCPQNSGCFR 317
Db 1573 LINDTKKMDLQKGLSTGLVONFPNTIISKLEIGKFOQMLNISQHCYKQCPQNSGCFR 1632
QY 318 HLDEREBCCLLNTYKQEGDKCVENPNPTCNENNGGCDADACTEEDSGSSRKITCECTK 377
Db 1633 HLDEREBCCLLNTYKQEGDKCVENPNPTCNENNGGCDADACTEEDSGSSRKITCECTK 1692
QY 378 PDSYPLFDGIFCSS 391
Db 1693 PDSYPLFDGIFCSS 1706

RESULT 6

A45545
major merozoite surface antigen - malaria parasite (Plasmodium falciparum) (fragments)
C:Species: Plasmodium falciparum
C:Date: 17-Feb-1994 #sequence_revision 17-Feb-1994 #text_change 31-Dec-2004
C:Accession: A45545
R:Blackman, M.J.; Ling, I.T.; Nicholls, S.C.; Holder, A.A.
Mol. Biochem. Parasitol. 49, 29-33, 1991
A:Title: Proteolytic processing of the Plasmodium falciparum merozoite surface protein-1
A:Reference number: A45545; MUID:92131048; PMID:1775158
A:Accession: A45545
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-400 <BLA>
A:Cross-references: UNIPROT:Q03999; UNIPARC:UPI000007B5E4
A:Note: Sequence extracted from NCBI backbone (NCBI:77612, NCBI:77621)
C:Superfamily: G surface protein
C:Keywords: glycoprotein; merozoite; surface antigen; tandem repeat

Query Match 56.3%; Score 1166.5; DB 2; Length 400;
Best Local Similarity 58.0%; Pred. No. 6.1e-54;
Matches 220; Conservative 55; Mismatches 83; Indels 21; Gaps 2;

QY 14 SGTMAISTYMDNIIISGFENEYDVYILKPLAGYRSLSKQIEKNITFTFNILNDILNSRLK 73
Db 22 TGEATPTEVIDNIIISKIENEYEVYILKPLAGYRSLSKQIEKNITFTFNIVYKDLNSRPN 81
QY 74 KRKYFLVDLESDFMOFKHISSENYIIEDESFKLINSEOKNTLLSKYKIESVENDIKFAQ 133
Db 82 KRENFKNVLESDFLIPKOLTSNNVYKQPYKFLNKEKDKFLSSYNYIKDSIDTIDINPAN 141
QY 134 EGISYVEKVLAKYKODLESIKKVIKEKEKPPSPPTTTPSPAKTDEOKKESKFLPFLTN 193
Db 142 DVLGYTKLSERKYSDDLISIKYI-----NDKGENEKTLPFLNN 181
QY 194 IETLVNKNKIDVYLINAKINDCNVEKDEAHVYITKLSDLKAIIDKIDLFKNPYDE 253
Db 182 IETLVKNVDKIDLFVHLEAKVNTYTERKSNVEKIKELNVYKTIQDKLADFKKNNFN 241
QY 254 AIKKLINDTKKMDLQKGLSTGLV-QNFPNTIISKLEIGKFOQMLNISQHCYKQCPQNS 312
Db 242 GIADLSTDYNNNNNLTKLSGMVFNIAKTVLSNLDGNLQGMNLNISQHCYKQCPQNS 301
QY 313 SCGRPHLDEREBCCLLNTYKQEGDKCVENPNPTCNENNGGCDADACTEEDSGSSRKIT 372
Db 302 SCGRPHLDEREBCCLLNTYKQEGDKCVENPNPTCNENNGGCDADACTEEDSGSSRKIT 361
QY 373 CECTKPDYPLFDGIFCSS 391
Db 362 CECTKPDYPLFDGIFCSS 380

RESULT 7

S05603
major merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum) (str
N:Alternate names: gp195 surface antigen
C:Species: Plasmodium falciparum
C:Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
C:Accession: S05603; S04850
R:Myler, P.J.
submitted to the EMBL Data Library, April 1989
A:Reference number: S05603
A:Accession: S05603
A:Molecule type: mRNA
A:Residues: 1-1639 <MYL>
A:Cross-references: UNIPROT:P04933; UNIPARC:UPI000000672; EMBL:X15063; NID:99896; PIDN:(
R:Myler, P.J.
Nucleic Acids Res. 17, 5401, 1989
A:Title: Nucleotide and deduced amino acid sequence of the gp195 (MSA-1) gene from Plasmodium
A:Reference number: S04850; MUID:89345116; PMID:2668887
A:Accession: S04850
A:Molecule type: mRNA

RESULT 10

A39401

merocofce surface antigen 1 precursor - Plasmodium vivax

C:Species: Plasmodium vivax

C:Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 31-Dec-2004

C:Accession: A39401

R:del Portillo, H.A.; Longacre, S.; Khouri, E.; David, P.H.

Proc. Natl. Acad. Sci. U.S.A. 88, 4030-4034, 1991

A:Title: Primary structure of the merocofce surface antigen 1 of Plasmodium vivax reveals

A:Reference number: A39401; MUID:91219506; PMID:2023952

A:Accession: A39401

A:Status: preliminary

A:Molecule type: DNA

A:Residues: 1-1726

A:Cross-references: UNIPROT:Q02569; UNIPARC:UPI0000177898; GB:M60807

C:Superfamily: G surface protein

C:Keywords: surface antigen

Query Match 38.2%; Score 792; DB 2; Length 1726;

Best Local Similarity 43.1%; Pred. No. 1,1e-33;

Matches 160; Conservative 75; Mismatches 114; Indels 22; Gaps 7;

Query 32 NEVDYVYKPLAGVYRSIKKQIEKNIIFTENLNDILNSRLKKRYFLDLVIESDLMQFK 91

Db 1346 SDYDVYVKKPLAGWKYKIKQLEHNVNAFNNTITMDLSRLKKNYFLEVLNSDLNPKY 1405

QY 92 ISSNEYIIEEDFPKLNSQKNTLKSYYKIESVENDIKFQDEGISYVEKTLAKYKDL- 150

Db 1406 SPSEYVYIKDYPKLDLEKKKKLLGSYYKIASIDKDLGTANDGVNYYNKGELKYHTLT 1465

QY 151 ---ESIKKV---IKEEKKFPSSPPTTPSPAKTDEQKES---KFLPFLNIEFLVNNL 201

Db 1466 AVNEEVKKVEADIKAEDEKIKKIGSDSYKTETKQSMAKKALEKYLPLFSLQKEYESL 1525

QY 202 VNKIDYVILNKAKINDCNVEKDEAHVKITLSDLKALDKIDLFKNPYDEFAIKULIND 261

Db 1526 VSKVNTYTDNKKVYIINNQCLEKAEITVKKLOPNYKMDKLELYK-----KSEKK--NE 1578

QY 262 DTKKDMGKGLSTGLV-QNPFNTIISKIIEKRPQDMLNISGHCVKQCPENSGCFRHL 320

Db 1579 VKSGGLLEKMKSKIKENESKEILISQLNVQTLQTLNWSSEHTCIDTNVPNNAQRYRLD 1638

QY 321 EREBCKCLNANKQEBGDCVENPNPTCNENNGGCDADATCTEEDSGSSSRKKTCTECPD 380

Db 1639 GMEERCLLTTRKEEGKCVPGSNVTCKDNNGGCAPEACKNTLDS---NKLVCCKTREGS 1694

QY 381 YPLFDGIFCSS 391

Db 1695 EPLFEGVPCSS 1705

RESULT 11

A45604

major blood-stage surface antigen Pv200 - Plasmodium vivax

C:Species: Plasmodium vivax

C:Date: 22-Apr-1993 #sequence_revision 18-Nov-1994 #text_change 31-Dec-2004

C:Accession: A45604

R:Gibson, H.L.; Tucker, J.E.; Kaelow, D.C.; Kretzlj, A.U.; Collins, W.E.; Kiefer, M.C.;

Mol. Biochem. Parasitol. 50, 325-333, 1992

A:Title: Structure and expression of the gene for Pv200, a major blood-stage surface ant

A:Reference number: A45604; MUID:92158013; PMID:1371329

A:Accession: A45604

A:Status: preliminary

A:Molecule type: DNA

A:Residues: 1-1751 <GB>

A:Cross-references: UNIPROT:Q26194; UNIPARC:UPI0000083C26; GB:M75674; NID:9160608; PID:9

A:Note: sequence extracted from NCBI backbone (NCBIN:83591, NCBIP:83592)

C:Superfamily: G surface protein

C:Keywords: surface antigen

Query Match 37.7%; Score 781; DB 2; Length 1751;

Best Local Similarity 40.8%; Pred. No. 4.2e-33;

Matches 156 Conservative 78; Mismatches 104; Indels 44; Gaps 6;

OY 32 NEVDIYYLPLAGVTRSLKQIQEKNIFTPNVLNDILNSRLKKRKRYFLDVLBSDLMOFKH 91
 :::|::|::|::|::|::|::|::|::|::|::|::|:
DB 1371 SDYDVVVYLKLPLAGMWIKTKQQLLENHVNAENTITMDLSRLKKRNLYFLEVLNDDLMPFY 1430

OY 92 ISSNYIIIEDPSKLLNSEOKNTLKSYKYIKESVENIDIPFAOGISYEVEVLAKYKDLE 151
 |||||::|::|::|::|::|::|::|::|::|::|::|::|:
DB 1431 SSSGGYIIHKDPKLLLDLEKKKLLIGSYKIYGASIDMGLATANDGVITYNNKGELYKHLD 1490

OY 152 SIKAYIKEEKKEFPSPPTPPSPAKTDEOKE-----SKELPF 190
 |::|::|::|::|::|::|::|::|::|::|::|::|:
DB 1491 GKTEIEKKVEDDI-----KKODELKKLGVNVSODSCKNEFIACKALEKLPF 1539

OY 191 LTNIELTLNVNLNKIIDYLINLKAINDCNVEKDEAHVKITKLSDKALDDKITLFENPY 250
 ::|::|::|::|::|::|::|::|::|::|::|::|:
DB 1540 LNSLOKEYSVLSKVNTVTDNLIKVIYNQCLEKEKEAEIVTVKQADPNVMDEKLEYR-- 1596

OY 251 DFEAIKKLINDTKDMGKGLSTGLV-QNFNTIISKILEGFOMLNISHOCVAKC 309
 ::|::|::|::|::|::|::|::|::|::|::|::|:
DB 1597 --KSERK-NEKXSGGLEMKMSKLIKENSEKEILLSOLLNAVOTQLLTNSSHTCIDTNV 1652

OY 310 PENSCEFHLDEREECECLINYKOEGDKCVENPNIPICNENNCGCDAPCTCEDSGSRK 369
 ::|::|::|::|::|::|::|::|::|::|::|::|:
DB 1653 PDMAVCYHYLOTETEMRCILLTFKEBGKCVPASNVTCKNNNGCAEBACKMDS----N 1708

OY 370 KITCECTKPDSYPFLFDGIFFCS 391
 |:|::|::|::|::|::|::|::|::|::|::|::|:
DB 1709 KIVCKCTKEGSBEPLEFGVFCS 1730

RESULT 12

A28121
major merozoite surface antigen - Plasmodium yoelii (fragment)
CSpecies: Plasmodium yoelii
CDate: 30-Jun-1989 #sequence_revision 30-Jun-1989 #ext_change 31-Dec-2004
CAccession: A28121
R:Burns Jr., J.M.; Daly, T.M.; Vaidya, A.B.; Long, C.A.
Proc. Natl. Acad. Sci. U.S.A. 85, 602-606, 1988
ATitle: The 3' portion of the gene for a Plasmodium yoelii merozoite surface antigen enc
AReference number: A28121; MUID:88124889; PMID:2448778
AMolecule type: DNA
AResidues: 1-680 <BUR>
A:Cross-references: UNIPROT:P13928; UNIPARC:UP1000016BF04; GB:J03612; NID:g160678; PID:g1
AExperimental source: strain 17XL
ANote: The authors translated the codon GTA for residue 429 as Leu
C:Superfamily: G surface protein
CKeywords: Surface antigen

Query Match 26.7%; Score 553.5; DB 2; Length 680;
Best Local Similarity 30.8%; Pred. No. 1e-21;
Matches 127; Conservative 88; Mismatches 147; Indels 51; Gaps 9;

OY 9 PG---GSGSGTMALSIVTD-----NILSGPENEDVLYLPLAG 44
 ||:||::|::|::|::|::|::|::|::|::|::|::|::|:
DB 269 PGAVGSGGTDRVAVGSSVDNEDDDIYOIASQGSEDPAPEKIDISEFTNESLVYYTYRLGS 328

OY 45 YVRSLKVOIEKNIFTFNINLNDILNSRLKKRYFLDVLBSDLMOFHISNEYIIEDFSFX 104
 :||||::|::|::|::|::|::|::|::|::|::|::|::|:
DB 329 TYKSLKGMLEEFSTTIKEDMTNGLNNXSQRKFDFEVLSHELDLFDOLSTNNKYIRNPYQ 388

OY 105 LLNSEOKNTLKSYKYIKESVENIDIPFAOGISYEVEVLAKYKDDLESIAKIVEKEKF 164
 ||:::::|::|::|::|::|::|::|::|::|::|::|::|:
DB 389 LLNDNDKOKOIYNLKVATKGINEDIETTGDGKFPKWVEVNTQAAYEQIATE--- 445

OY 165 PSSPETTPSPAKTDEOKE--SKFLPILTNIETLYNVLNKIIDYLINLKAINDCNVE 222
 |:|::|::|::|::|::|::|::|::|::|::|::|:
DB 446 -----AETNDINKEEKKKYIPLEDLKGLETIVIGAEEYSBEELQNLRDWNKNE 494

OY 223 KDEAHVKITKLSDKALDDKITLFENPYDFAIKKULINDTKDMGKGLSTGLV-QNFP 261
 ||::|::|::|::|::|::|::|::|::|::|::|::|:
DB 495 KADEFILTKNELKYIQIDEKIDEFVEHAH-----NHHGISIALNNLWKSGLVGESES 547

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Qy 282 NTIISKLEGRFQWMLNIS-OHQC-KKQCENSGCFPHLDERECCKLALMYKQ-EGDKC 338
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 548 KKLAKMLNMDQMDLLGVDPKHAVCYDTRDIPFNACCFDDGDTGTEWRCLLGGKKGBGNTC 607

Qy 339 VENPNPTCENNNGGCDADATCTEEDSGSSRRKKITECTKTPDSPYPLFDGIFCSS 391
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 608 VENNPTCDINNCGCDPTFASCONMAESTENSKKIICTCKEPTPNMAYVEGVFSS 660

RESULT 13
A45532
major merozoite surface antigen precursor - Plasmodium yoelii
C:Species: Plasmodium yoelii
C:Date: 03-Jun-1993 #sequence_1
C:Accession: A45532, A45531
A:Accession: A45532
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-1772 <LEM>
A:Cross-references: UNIPROT:P13128; UNIPARC:UPI000012F636; GB:J04668; NID:g160492; PID:g
R:Dayis, T.M.; Burns Jr., J.M.; Long, C.A.
Mol. Biochem. Parasitol. 36, 283-285, 1989
A:Title: Precursor to the major merozoite surface antigen of Plasmodium yoelii: cloning
A:Reference number: A45531; MUID:90014982; PMID:2797064
A:Accession: A45531
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 454-1094 <DAL>
A:Cross-references: UNIPARC:UPI0000000390; GB:J03975; NID:g160081; PID:g160082
A:Superfamily: G surface protein
A:Keywords: surface antigen

Query Match 26.7%; Score 553.5; DB 2; Length 1772;
Best Local Similarity 30.8%; Pred. No.3.1e-21;
Matches 127; Conservative 88; Mismatches 147; Indels 51; Gaps 9;

Qy 9 PG---GSGSGTMAISVTMD-----NILSGFENEYDVILKPLAG 44
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 1361 PGAVPGSGTDRVAGSSVDDNEDDDIYQIAGQSEDAPEKDIISBFTNESLYVYTKRLGS 1420

Qy 45 VYRLKQIQIEKNITFENLNLNDILNSRLKRRKPYLDVLESLLMQFKHSSNEYIIBDSFK 104
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 1421 TYKSLKQMLREFSTIKEDMTNGLNKNSQKNDLEVLSHSLDLFKDLSTKRYVIRNPYQ 1480

Qy 105 LLNBEQKNTLLSKYKIESVENDIKFAQSIGISYEVKLAKYKDDLESIKVIEKEKEF 164
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 1481 LLDDPKDKQIVNLKVAKKGINEDIETTTDGIKFPKNKVELYNQOLAIVEQIATIE--- 1537

Qy 165 PSSPPTTPSPDAKTDEQKKE--SKFLPEPLTNIETLYNNLVNKIDYILNLAKINDCNVE 222
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 1538 -----AETNDTKKEKKKIYIPLEDLKGIVETVIGQAEYSBELQNRLDNYKNE 1586

Qy 223 KDEAHVKTITKSDLKAIIDKIDPLFKNPYDFEFAIKKLINDDTPKMKMLGKLSTGLV-QNFP 281
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 1587 KAEFEILTKNLEKXIQIDEKIDEFEHAE-----NKKHIASIALNNLNKSGLVGEGS 1639

Qy 282 NTIISKLEGRFQWMLNIS-OHQC-KKQCENSGCFPHLDERECCKLALMYKQ-EGDKC 338
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 1640 KKLAKMLNMDQMDLLGVDPKHAVCYDTRDIPFNACCFDDGDTGTEWRCLLGGKKGBGNTC 1639

Qy 339 VENPNPTCENNNGGCDADATCTEEDSGSSRRKKITECTKTPDSPYPLFDGIFCSS 391
|||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 1700 VENNPTCDINNCGCDPTFASCONMAESTENSKKIICTCKEPTPNMAYVEGVFSS 1752

RESULT 14
A45546
major merozoite surface antigen precursor - Plasmodium chabaudi chabaudi

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C.Species: Plasmodium chabaudi
C.Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
CAccession: A45546
R.DileleerJdler.W.; Hendrix, D.; Bendahman.N.; Hanegreets.J.; Brigs.L.; Hamers-Casteren.M.; Biochem. Parasitol. 43, 231-244, 1990
Mol. Biochem. Parasitol. 43, 231-244, 1990
A.Title: Molecular cloning and sequence analysis of the gene encoding the major merozoite surface protein
A.Reference number: A45546; MUID:91218805; PMID:2090945
Accession: A45546
Status: preliminary
Molecule type: mRNA
Residues: 1-1785
Cross-references: UNIPROT:Q25685; UNIPARC:UPI000007B6DB; GB:M34947; NID:g160597; PID:g160597
Superfamily: G surface protein
Keywords: surface antigen

Query Match 25.6%; Score 531; DB 2; Length 1785;
Best Local Similarity 32.4%; Pred.No.4,6e-20;
Matches 122; Conservative 86; Mismatches 134; Indels 34; Gaps 11;

Dy 25 NILSGFENEYDIYLKPLAGVTRSLKKQIEKNITFNLNLDI---LNSRLKRRTFLDV 81
DILDAFKSENEYTYTKLSINTKYSPCKMLKE--FSMIKEDIMTGIVTLERKNDPLDV 1471
LESDLMOEFHISNENIIDSFLLNSEOKNTLKRYIKESVENDKFAOEGISYEK 141
LYSELALFDINDTNKFVNVPYQLDNDDKKOMINLKAIRKVETDEIFATIDIFFPK 1511
VLAKYKDDESISKVIKEEKEFPSSPPTTPSPAFTDEOKSKSFLPYLTNIETLYNL 201
MEELVKPOLMANNEQ-----AAIGTEP-----TDAEKK-KVAPIREDKLGVETI 1576
VNRIDDYLVINKAKINCDCVEOEHAHVKTITSCLKRIDKIDLFGKPYPFEAIKLIND 261
LGAEFESSLLLQHLENNYKIEMAPGDIAMANETYRIIDEKDF----VESAEK-NK 1629
DTKMOLKGILTSTGLV-QNFPRTIISKLIEGRFQMANT-SHQCVACKCPENSRCFRHL 319
HIASIALNNLNKSGLVTGESKIIIAKMLMDAMDILLGISNVHCISTSPDNAACFRVD 1630
DERECKCLANYKO--EGDKVCENPNPTCNENNNGGDADATCTBEDS--GSSRKAITCEC 375
DGTEWRCLTGGKODDGNCRCAADDPAFCVNNNGCGCDXADCREVENTDPDSKKIVTC 1749
TKPDYSYLPFDGIICSS 391
KEPNNAVAYAGVFCS 1765

RESULT 15
E71606
hypothetical protein PFB0765w - malaria parasite (Plasmodium falciparum)
Species: Plasmodium falciparum
Date: 13-Nov-1998 #sequence_revision 13-Nov-1998 #text_change 31-Dec-2004
Accession: E71606
RGardner,M.J.; Tetteelin,H.; Carnucci,D.J.; Cummings,L.M.; Aravind,L.; Koonin,E.V.;
.Partes,M./Salberg,S.; Zhou,L.; Sutton,G.G.; Clayton,R.; White,O.; Smith,H.O.
Science 282, 1126-1132, 1998
Title: Chromosome 2 sequence of the human malaria parasite Plasmodium falciparum.
Reference number: A11600; MUID:99021743; PMID:9804551
Accession: E71606
Status: preliminary; nucleic acid sequence not shown; translation not shown
Molecule type: DNA
Residues: 1-980 <GAR>
Cross-references: UNIPROT:O81659; UNIPARC:UPI00001788FI; GB:AEO01417; GB:AEO01362; NID:
Experimental source: clone 3D7
Gene: PFB0765w

Query Match 8.7%; Score 180.5; DB 2; Length 980;
Best Local Similarity 23.7%; Pred.No.0.043;
Matches 102; Conservative 77; Mismatches 140; Indels 11; Gaps 23;

31 ENEXDYVILKPLAGVRSLKKQIEKNI-----FTFNLMNDLI---NSRLKK 74

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GenCore version 5.1.7
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OM protein - protein search, using sw model

Run on: May 5, 2006, 00:17:57 ; Search time 231 Seconds
(without alignments)
1194.206 Million cell updates/sec

Title: US-10-057-532a-7
Perfect score: 2071
Sequence: 1 MAHHHHHPPGGSGGTMAIS.....TCECTKPDPYPLDFGICSS 391

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues
Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1965	94.9	1720	2	Q25922_PLAFA
2	1965	94.9	1720	2	Q25922_PLAFA
3	1961	94.7	652	2	Q25923_PLAFA
4	1942	93.8	373	2	Q25723_PLAFA
5	1942	93.8	570	2	Q25972_PLAFA
6	1942	93.8	570	2	Q25968_PLAFA
7	1942	93.8	1694	2	Q76411_PLAFA
8	1942	93.8	1701	1	MSPI_PLAFA
9	1942	93.8	1701	1	MSPI_PLAFA
10	1935	93.4	373	2	Q25722_PLAFA
11	1933	93.3	373	2	Q25727_PLAFA
12	1932.5	93.3	569	2	Q25978_PLAFA
13	1931	93.2	1726	1	MSPI_PLAFA
14	1930.5	93.2	1682	1	MSPI_PLAFA
15	1929	93.1	373	2	Q25722_PLAFA
16	1928	93.1	1726	1	MSPI_PLAFA
17	1928	93.1	1726	1	MSPI_PLAFA
18	1926.5	93.0	569	2	Q25980_PLAFA
19	1926.5	93.0	569	2	Q25970_PLAFA
20	1926.5	93.0	569	2	Q25982_PLAFA
21	1926.5	93.0	1688	2	Q764K9_PLAFA
22	1926.5	93.0	1700	2	Q764L2_PLAFA
23	1924	92.9	373	2	Q25724_PLAFA
24	1922.5	92.8	372	2	Q25717_PLAFA
25	1919	92.7	373	2	Q25721_PLAFA
26	1919	92.7	373	2	Q25718_PLAFA
27	1917.5	92.6	372	2	Q25719_PLAFA
28	1917.5	92.6	372	2	Q25720_PLAFA
29	1917.5	92.6	372	2	Q25720_PLAFA
30	1917	92.6	1689	2	Q764K8_PLAFA
31	1916.5	92.5	569	2	Q25983_PLAFA

32	1912.5	92.3	651	2	Q25924_PLAFA
33	1910.5	92.3	569	2	Q25975_PLAFA
34	1910.5	92.3	569	2	Q25974_PLAFA
35	1910.5	92.3	569	2	Q25979_PLAFA
36	1910.5	92.3	569	2	Q25977_PLAFA
37	1910.5	92.3	569	2	Q25969_PLAFA
38	1910.5	92.3	1688	2	Q764L0_PLAFA
39	1910.5	92.3	1694	2	Q25974_PLAFA
40	1910.5	92.3	1694	2	Q25975_PLAFA
41	1910.5	92.3	1699	2	Q764L3_PLAFA
42	1910.5	92.3	1704	2	Q25724_PLAFA
43	1906.5	92.1	372	2	Q25725_PLAFA
44	1901.5	91.8	372	2	Q25726_PLAFA
45	1900.5	91.8	372	2	Q25997_PLAFA

ALIGNMENTS

Query Match	Score	DB 2	Length	1720
Best Local Similarity	100.0%	Pred. No. 1.3e-90	Indels	0
Matches	374	Conservative	0	Mismatches
DB	1327	ALSTVMDILSGFENEYDVILKPLAGYVRSLKQIEKNIFTPLNLDLINSRLKRRY	77	
QY	18	ALSTVMDILSGFENEYDVILKPLAGYVRSLKQIEKNIFTPLNLDLINSRLKRRY	77	
QY	78	FLDVLSDLMQFKIISNEYIIEDSFKLINSKQNTLLSKYKIKESYENDIKRAQEGIS	137	

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Db      1387 FLDVLESDFMOPFKHISNSNEYIIEDSPKLNSEOKNTLLSKYKIKESYENDIKFAQEGIS 1446
Qy      138 YEEKVLAKYKODLSIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLNIETL 197
Db      1447 YEEKVLAKYKODLSIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLNIETL 1506
Qy      198 YNNLVNKIDYVILNKAKINDCNVEKDEAHVKTITKLSDLKAIIDKIDLFKNPYDFAIAKK 257
Db      1507 YNNLVNKIDYVILNKAKINDCNVEKDEAHVKTITKLSDLKAIIDKIDLFKNPYDFAIAKK 1566
Qy      358 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMNLISQHCYKQCPENSGCFR 317
Db      1567 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMNLISQHCYKQCPENSGCFR 1626
Qy      318 HLDREBECKCLNTYKQEGDKCVENPNPTCNENNGCGDADATCTEEDSGSSRRKITTCECTK 377
Db      1627 HLDREBECKCLNTYKQEGDKCVENPNPTCNENNGCGDADATCTEEDSGSSRRKITTCECTK 1686
Qy      378 PDSYPLPDGIFCSS 391
Db      1687 PDSYPLPDGIFCSS 1700

```

RESULT 2

Q810U8_PLAF7 PRELIMINARY; PRT; 1720 AA.

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ID      Q810U8
AC      Q810U8
DT      01-MAR-2003 (TREMBLrel. 23, Created)
DT      01-MAR-2003 (TREMBLrel. 23, Last sequence update)
DT      01-MAR-2004 (TREMBLrel. 26, Last annotation update)
DE      Merzoizite surface protein 1.
GN      Name=PF1475w;
OS      Plasmodium falciparum (isolate 3D7).
OC      Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
CX      NCBI_TaxID=36329;

```

NUCLEOTIDE SEQUENCE.

```

RA      MEDLINE=22255708; PubMed=12368867; DOI=10.1038/nature01095;
RA      Hall N., Pain A., Bertrman M., Churcher C., Harris B., Harris D.,
RA      Mungall K., Bowman S., Atkin R., Baker S., Barron A., Brooke K.,
RA      Buckee C.O., Burrows C., Cherevach I., Chillingworth C., Corton C.,
RA      Chillingworth T., Christodoulou Z., Clark L., Clark R., Corton C.,
RA      Cronin A., Davies R., Davis P., Dear P., Dearden F., Doggett J.,
RA      Felwell T., Goble A., Goodhead I., Gwilliam R., Hamlin N., Hance Z.,
RA      Harper D., Hauser H., Hornsby T., Holroyd S., Horrocks P.,
RA      Humphrey S., Jagals K., James K.D., Johnson D., Kerhornou A.,
RA      Knights A., Kontorov B., Kyes S., Larke N., Lawson D., Lemard N.,
RA      Line A., Maddison M., McLean J., Mooney P., Moutie S., Murphy L.,
RA      Oliver K., Ormond D., Price C., Quail M.A., Rabinowitsch E.,
RA      Rajandream M.A., Rutter S., Rutherford K.M., Sanders M., Simmonds M.,
RA      Seeger K., Sharp S., Smith R., Squares R., Squares S., Stevens K.,
RA      Taylor K., Tivey A., Unwin L., Whitehead S., Woodward J.,
RA      Sulston J.E., Craig A., Newbold C., Barrell B.G.;
RT      "Sequence of Plasmodium falciparum chromosomes 1, 3-9 and 13."
RL      Nature 419:527-531(2002).
CC      -!- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
CC      similarity).
CC      EMBL; AL929358; CAD51981.1; -; Genomic_DNA.
CC      HSSP; P04933; ICEJ.
DR      SMR; Q810U8; 1607-1699.
DR      GO; GO:0016020; C:membrane; IEA.
DR      GO; GO:0009405; P:pathogenesis; IEA.
DR      InterPro; IPR006209; EGF_like.
DR      InterPro; IPR010901; MSP1_C.
DR      Pfam; PF00008; EGF_1.
DR      Pfam; PF07462; MSP1_C; 1.
KW      Membrane; Merzoizite; Repeat.
SQ      SEQUENCE 1720 AA; 195726 MW; 549926C112475DA0 CRC64;

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Query Match 94.9%; Score 1965; DB 2; Length 1720;
 Best Local Similarity 100.0%; Pred. No. 1.3e-90;
 Matches 374; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      18 AISTVMDNIIISGFENEVDVILKPLAGYRSLLKQIEKNITFTFNLDNIIINSRLKKRY 77
Db      1327 AISTVMDNIIISGFENEVDVILKPLAGYRSLLKQIEKNITFTFNLDNIIINSRLKKRY 1386
Qy      78 FLDVLESDFMOPFKHISNSNEYIIEDSPKLNSEOKNTLLSKYKIKESYENDIKFAQEGIS 137
Db      1387 FLDVLESDFMOPFKHISNSNEYIIEDSPKLNSEOKNTLLSKYKIKESYENDIKFAQEGIS 1446
Qy      138 YEEKVLAKYKODLSIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLNIETL 197
Db      1447 YEEKVLAKYKODLSIKKVIKEEKEKPPSPPTTTPSPAKTDEOKESKFLPLNIETL 1506
Qy      198 YNNLVNKIDYVILNKAKINDCNVEKDEAHVKTITKLSDLKAIIDKIDLFKNPYDFAIAKK 257
Db      1507 YNNLVNKIDYVILNKAKINDCNVEKDEAHVKTITKLSDLKAIIDKIDLFKNPYDFAIAKK 1566
Qy      258 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMNLISQHCYKQCPENSGCFR 317
Db      1567 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMNLISQHCYKQCPENSGCFR 1626
Qy      318 HLDREBECKCLNTYKQEGDKCVENPNPTCNENNGCGDADATCTEEDSGSSRRKITTCECTK 377
Db      1627 HLDREBECKCLNTYKQEGDKCVENPNPTCNENNGCGDADATCTEEDSGSSRRKITTCECTK 1686
Qy      378 PDSYPLPDGIFCSS 391
Db      1687 PDSYPLPDGIFCSS 1700

```

RESULT 3

Q25923_PLAFA PRELIMINARY; PRT; 652 AA.

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ID      Q25923
AC      Q25923;
DT      01-NOV-1996 (TREMBLrel. 01, Created)
DT      01-NOV-1996 (TREMBLrel. 01, Last sequence update)
DT      01-MAR-2004 (TREMBLrel. 26, Last annotation update)
DE      Merzoizite surface antigen 1 (fragment).
GN      Name=gp190; Synonym=MSA1, MSP1, PMSA;
OS      Plasmodium falciparum.
OC      Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
CX      NCBI_TaxID=5833;

```

NUCLEOTIDE SEQUENCE.

```

RA      MEDLINE=95354793; PubMed=7628566; DOI=10.1006/expr.1995.1091;
RA      Tolle R., Bujard H., Cooper J.A.;
RT      "Plasmodium falciparum: variations within the C-terminal region of
RT      merzoizite surface antigen-1."
RL      Exp. Parasitol. 81:47-54(1995).
CC      -!- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
CC      similarity).
CC      EMBL; Z35328; CNA84557.1; -; Genomic_DNA.
CC      HSSP; P04933; ICEJ.
DR      SMR; Q25923; 539-631.
DR      GO; GO:0016020; C:membrane; IEA.
DR      GO; GO:0009405; P:pathogenesis; IEA.
DR      InterPro; IPR006209; EGF_like.
DR      InterPro; IPR010901; MSP1_C.
DR      Pfam; PF00008; EGF_1.
DR      Pfam; PF07462; MSP1_C; 1.
KW      Membrane; Merzoizite.
FT      NON_TER 1
SQ      SEQUENCE 652 AA; 74293 MW; 286A87737B490A62 CRC64;

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Query Match 99.7%; Score 1961; DB 2; Length 652;
 Best Local Similarity 99.7%; Pred. No. 7.3e-91;
 Matches 373; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Qy      18 AISTVMDNIIISGFENEVDVILKPLAGYRSLLKQIEKNITFTFNLDNIIINSRLKKRY 77
Db      259 AISTVMDNIIISGFENEVDVILKPLAGYRSLLKQIEKNITFTFNLDNIIINSRLKKRY 318
Qy      78 FLDVLESDFMOPFKHISNSNEYIIEDSPKLNSEOKNTLLSKYKIKESYENDIKFAQEGIS 137

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Db 319 FLVDLESJLMQFKHISNVEYIIEDSFKLINSEOKNTLLSKYKIKESVENDIKFAQEGIS 378
QY YEKVLAKYKODLESIKKVIKEKEKPPSPPTTPEPPAKTDEOKKESKFLPLNIETL 197
Db 319 YEKVLAKYKODLESIKKVIKEKEKPPSPPTTPEPPAKTDEOKKESKFLPLNIETL 438
QY YNNLVNKIDYILINKAKINDCNVEKDEAHVKITKLSDLKALIDKIDLFKNPYDEAIAIK 257
Db 439 YNNLVNKIDYILINKAKINDCNVEKDEAHVKITKLSDLKALIDKIDLFKNPYDEAIAIK 498
QY 258 LINDTCKDMGLKLISTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPQNSGCFR 317
Db 499 LINDTCKDMGLKLISTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPQNSGCFR 558
QY 318 HLDREBECKCLLNTYQOEBDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKKTCECTK 377
Db 559 HLDREBECKCLLNTYQOEBDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKKTCECTK 618
QY 378 PDSYPLFDGIFCSS 391
Db 619 PDSYPLFDGIFCSS 632

RESULT 4

025723 PLAFB PRT; 373 AA.
ID 025723 PLAFB PRELIMINARY;
AC 025723
DT 01-NOV-1996 (TREMBLrel. 01, Created)
DT 01-NOV-1996 (TREMBLrel. 01, Last sequence update)
DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)
DE Mezozoite surface protein 1, 42 kDa C-terminal region (Fragment).
GN Name=MSP-1;
OS Plasmodium falciparum.
OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
OX NCBI_TaxID=5833;
RN NUCLEOTIDE SEQUENCE.
RP Shi Y.-P., Alpern M.P., Poyoa M.M., Nahlen B.L., Oloo A.G., Lal A.A.;
RL Submitted (FBI-1995) to the EMBL/Genbank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By similarity).
EMBL: U20728; AAA62219.1; -; Genomic_DNA.
DR HSSP; Q25976; 10B1.
DR SMR; 025723; 281-373.
DR GO; GO:0016020; C:membrane; IEA.
DR InterPro; IPR006209; P:patchogenesis; IEA.
DR InterPro; IPR010901; MSP1_C.
DR Pfam; PF00008; EGF_1.
DR Pfam; PF07462; MSP1_C; 1.
KM Membrane; Mezozoite.
FT NON_TER 1
FT NON_TER 373
SQ SEQUENCE 373 AA; 42849 MW; EE9A891631DE174F CRC64;

Query Match 93.8%; Score 1942; DB 2; Length 373;
Best Local Similarity 98.9%; Pred. No. 3 6e-90;

Matches 369; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 18 AISTVMDNIIISGFENEYDVYILKPLAGYRSIKQIEKNIPTFNINLNDILNSRLKRRY 77
Db 1 AISTVMDNIIISGFENEYDVYILKPLAGYRSIKQIEKNIPTFNINLNDILNSRLKRRY 60
QY 78 FLVDLESJLMQFKHISNVEYIIEDSFKLINSEOKNTLLSKYKIKESVENDIKFAQEGIS 137
Db 61 FLVDLESJLMQFKHISNVEYIIEDSFKLINSEOKNTLLSKYKIKESVENDIKFAQEGIS 120
QY YEKVLAKYKODLESIKKVIKEKEKPPSPPTTPEPPAKTDEOKKESKFLPLNIETL 197
Db 121 YEKVLAKYKODLESIKKVIKEKEKPPSPPTTPEPPAKTDEOKKESKFLPLNIETL 180
QY YNNLVNKIDYILINKAKINDCNVEKDEAHVKITKLSDLKALIDKIDLFKNPYDEAIAIK 257

Db 181 YNNLVNKIDYILINKAKINDCNVEKDEAHVKITKLSDLKALIDKIDLFKNPYDEAIAIK 240
QY LINDTCKDMGLKLISTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPQNSGCFR 317
Db 241 LINDTCKDMGLKLISTGLVONFPNTIISKLEGGFQDMLNISQHCYKQCPQNSGCFR 300
QY 318 HLDREBECKCLLNTYQOEBDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKKTCECTK 377
Db 301 HLDREBECKCLLNTYQOEBDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKKTCECTK 360
QY 378 PDSYPLFDGIFCSS 390
Db 361 PDSYPLFDGIFCSS 373

RESULT 5

09TYG2 PLAFB PRT; 570 AA.
ID 09TYG2 PLAFB PRELIMINARY;
AC 09TYG2;
DT 01-MAY-2000 (TREMBLrel. 13, Created)
DT 01-MAY-2000 (TREMBLrel. 13, Last sequence update)
DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)
DE Major mezozoite surface protein (Fragment).
GN Name=MSP1;
OS Plasmodium falciparum.
OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
OX NCBI_TaxID=5833;
RN NUCLEOTIDE SEQUENCE.
RP MEDLINE=86011243; PubMed=3079521;
RX Tanabe K., Mackay M., Goman M., Scalfe J.G.;
RA "Allelic dimorphism in a surface antigen gene of the malaria parasite Plasmodium falciparum".
RL J. Mol. Biol. 195:273-287(1987).
RN [2]
RN NUCLEOTIDE SEQUENCE.
RP MEDLINE=93295445; PubMed=8515786; DOI=10.1016/0166-6851(93)90010-U;
RX Jongsutwises S., Tanabe K., Kanbara H.;
RA "Sequence conservation in the C-terminal part of the precursor to the major mezozoite surface proteins (MSP1) of Plasmodium falciparum from field isolates".
RL Mol. Biochem. Parasitol. 59:95-100(1993).
CC -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By similarity).
EMBL: D13343; BA02604.1; -; Genomic_DNA.
DR HSSP; P04933; ICB1.
DR SMR; 09TYG2; 457-549.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0009405; P:patchogenesis; IEA.
DR InterPro; IPR006209; EGF_1ike.
DR InterPro; IPR010901; MSP1_C.
DR Pfam; PF00008; EGF_1.
DR Pfam; PF07462; MSP1_C; 1.
KM Membrane; Mezozoite.
FT NON_TER 1
SQ SEQUENCE 570 AA; 8674DEC09B2D662A CRC64;

Query Match 93.8%; Score 1942; DB 2; Length 570;
Best Local Similarity 99.2%; Pred. No. 5.7e-90;

Matches 371; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 18 AISTVMDNIIISGFENEYDVYILKPLAGYRSIKQIEKNIPTFNINLNDILNSRLKRRY 77
Db 177 AISTVMDNIIISGFENEYDVYILKPLAGYRSIKQIEKNIPTFNINLNDILNSRLKRRY 236
QY 78 FLVDLESJLMQFKHISNVEYIIEDSFKLINSEOKNTLLSKYKIKESVENDIKFAQEGIS 137
Db 237 FLVDLESJLMQFKHISNVEYIIEDSFKLINSEOKNTLLSKYKIKESVENDIKFAQEGIS 296
QY YEKVLAKYKODLESIKKVIKEKEKPPSPPTTPEPPAKTDEOKKESKFLPLNIETL 197
Db 297 YEKVLAKYKODLESIKKVIKEKEKPPSPPTTPEPPAKTDEOKKESKFLPLNIETL 356

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QY 198 YNNLVNKIDVYLINLKKAKINDCNVEKDEAHVYKITKLSLKAIDKIDLFKNPYDEAIAKK 257
DB 357 YNNLVNKIDVYLINLKKAKINDCNVEKDEAHVYKITKLSLKAIDKIDLFKNPYDEAIAKK 416
QY 258 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGCFR 317
DB 417 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGCFR 476
QY 318 HLDREBECKCLNTYKQEDKCVENPNPTCNENNGCCDADATCTBEDSGSSRRKKTCECTK 377
DB 477 HLDREBECKCLNTYKQEDKCVENPNPTCNENNGCCDADATCTBEDSGSSRRKKTCECTK 536
QY 378 PDSYPLFDGIFCSS 391
DB 537 PDSYPLFDGIFCSS 550

RESULT 6
Q25968 PLAFPA PRELIMINARY; PRT; 570 AA.
ID Q25968
AC Q25968
DT 01-NOV-1996 (TREMBLrel. 01, Created)
DT 01-NOV-1996 (TREMBLrel. 01, Last sequence update)
DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)
DE Major mezoizote surface protein (fragment).
GN Name=MSPI;
OS Plasmodium falciparum.
OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
OX NCBI_TaxID=5833;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=93295445; PubMed=8515786; DOI=10.1016/0166-6851(93)90010-U;
RA Jongmuitwee S., Tanabe K., Kanbara H.;
RT "Sequence conservation in the C-terminal part of the precursor to the
RT field Isoletae."
RL Mol. Biochem. Parasitol. 59:95-100(1993).
CC -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
CC similarity).
DR EMBL; D13345; BAA02606.1; -; Genomic_DNA.
DR HSSP; P04933; 1CBJ.
DR SMK; Q25968; 457-549.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0009405; P:pathogenesis; IEA.
DR InterPro; IPR006209; EGF_like.
DR InterPro; IPR010901; MSPI_C.
DR Pfam; PF00008; EGF; 1.
DR Pfam; PF07462; MSPI_C; 1.
DR Membrane; Mezoizote.
FT NON TER
SQ SEQUENCE 570 AA; 64632 MW; 424BF553CCCF22BE CRC64;

Query Match 93.8%; Score 1942; DB 2; Length 570;
Best Local Similarity 99.2%; Pred. No. 5.7e-90;
Matches 371; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 18 AISTYMDNIIISGFENEYDVYILKPLAGYRSLKQIEKNITFPNINLNDILNSRLKRRKY 77
DB 177 AISTYMDNIIISGFENEYDVYILKPLAGYRSLKQIEKNITFPNINLNDILNSRLKRRKY 236
QY 78 FLVDVLESDLMQFKHISNNEYIIEDSPKLNSEOKNTLLKSYKYIKESYENDIKFAQEGIS 137
DB 237 FLVDVLESDLMQFKHISNNEYIIEDSPKLNSEOKNTLLKSYKYIKESYENDIKFAQEGIS 296
QY 138 YYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETL 197
DB 297 YYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETL 356
QY 198 YNNLVNKIDVYLINLKKAKINDCNVEKDEAHVYKITKLSLKAIDKIDLFKNPYDEAIAKK 257
DB 357 YNNLVNKIDVYLINLKKAKINDCNVEKDEAHVYKITKLSLKAIDKIDLFKNPYDEAIAKK 416
QY 258 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGCFR 317
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DB 417 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGCFR 476
QY 318 HLDREBECKCLNTYKQEDKCVENPNPTCNENNGCCDADATCTBEDSGSSRRKKTCECTK 377
DB 477 HLDREBECKCLNTYKQEDKCVENPNPTCNENNGCCDADATCTBEDSGSSRRKKTCECTK 536
QY 378 PDSYPLFDGIFCSS 391
DB 537 PDSYPLFDGIFCSS 550

RESULT 7
Q764L1 PLAFPA PRELIMINARY; PRT; 1694 AA.
ID Q764L1
AC Q764L1
DT 05-JUL-2004 (TREMBLrel. 27, Created)
DT 05-JUL-2004 (TREMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TREMBLrel. 27, Last annotation update)
DE Mezoizote surface protein 1.
GN Name=mspi;
OS Plasmodium falciparum.
OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
OX NCBI_TaxID=5833;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Tanabe K., Sakihama N., Kaneko A.;
RT "Strable SNPs in Malaria Antigen Genes in Isolated Populations."
RL Science 303:493-493(2004).
CC -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
CC similarity).
DR EMBL; AB116598; BAD08400.1; -; Genomic_DNA.
DR HSSP; Q25659; 1B9W.
DR SMK; Q764L1; 1581-1673.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0009405; P:pathogenesis; IEA.
DR InterPro; IPR006209; EGF_like.
DR InterPro; IPR010901; MSPI_C.
DR Pfam; PF00008; EGF; 1.
DR Pfam; PF07462; MSPI_C; 1.
DR Membrane; Mezoizote; Repeat.
SQ SEQUENCE 1694 AA; 193467 MW; 661419924EB7F694 CRC64;

Query Match 93.8%; Score 1942; DB 2; Length 1694;
Best Local Similarity 99.2%; Pred. No. 1.9e-89;
Matches 371; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 18 AISTYMDNIIISGFENEYDVYILKPLAGYRSLKQIEKNITFPNINLNDILNSRLKRRKY 77
DB 1301 AISTYMDNIIISGFENEYDVYILKPLAGYRSLKQIEKNITFPNINLNDILNSRLKRRKY 1360
QY 78 FLVDVLESDLMQFKHISNNEYIIEDSPKLNSEOKNTLLKSYKYIKESYENDIKFAQEGIS 137
DB 1361 FLVDVLESDLMQFKHISNNEYIIEDSPKLNSEOKNTLLKSYKYIKESYENDIKFAQEGIS 1420
QY 138 YYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETL 197
DB 1421 YYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETL 1480
QY 198 YNNLVNKIDVYLINLKKAKINDCNVEKDEAHVYKITKLSLKAIDKIDLFKNPYDEAIAKK 257
DB 1481 YNNLVNKIDVYLINLKKAKINDCNVEKDEAHVYKITKLSLKAIDKIDLFKNPYDEAIAKK 1540
QY 258 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGCFR 317
DB 1541 LINDTKKDMGKGLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGCFR 1600
QY 318 HLDREBECKCLNTYKQEDKCVENPNPTCNENNGCCDADATCTBEDSGSSRRKKTCECTK 377
DB 1601 HLDREBECKCLNTYKQEDKCVENPNPTCNENNGCCDADATCTBEDSGSSRRKKTCECTK 1660
QY 378 PDSYPLFDGIFCSS 391
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DB      1661 PD5YPLFDGIFCSS 1674

RESULT 8
MSPL_PLAFM
ID      MSPL_PLAFM      STANDARD;      PRT; 1701 AA.
AC      P13819;
DT      01-JAN-1990 (Rel. 13, Created)
DT      01-JAN-1990 (Rel. 13, Last sequence update)
DT      10-MAY-2005 (Rel. 47, Last annotation update)
DE      Merozoite surface protein 1 precursor (Merozoite surface antigens)
DE      (PMSA).
GN      Name=MSP-1;
OS      Plasmodium falciparum (Isolate FC27 / Papua New Guinea).
OC      Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
OX      NCBI_TaxID=5837;
[1]
RN      NUCLEOTIDE SEQUENCE.
RX      MEDLINE=8814299; PubMed=2449612; DOI=10.1016/0166-6851(88)90049-7;
RA      Peterson M.G., Coppel R.L., McIntyre P., Langford C.J., Woodrow G.,
RA      Brown G.V., Anders R.F., Kemp D.J.;
RT      "Variation in the precursor to the major merozoite surface antigens of
RT      Plasmodium falciparum."
RL      Mol. Biochem. Parasitol. 27:291-302(1988).
CC      -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.
CC      -1- PTM: Merozoite surface antigen contain the sequence of 83 kDa, 42
CC      kDa and 19 kDa antigens which are the major surface antigens of
CC      merozoites. The maturation take place during schizont.
-----
CC      This Swiss-Prot entry is copyright. It is produced through a collaboration
CC      between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC      the European Bioinformatics Institute. There are no restrictions on its
CC      use as long as its content is in no way modified and this statement is not
CC      removed.
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CC      -----
DR      EMBL; M19143; AAA29653.1; -; mRNA.
DR      PIR; A54498; A54498.
DR      HSSP; P04933; 1CEJ.
DR      SMR; P13819; 1588-1680.
DR      InterPro; IPR006209; EGF like.
DR      InterPro; IPR010901; MSPL_C.
DR      Pfam; PF00008; EGF_1.
DR      Pfam; PF07462; MSPL_C_1.
KW      Glycoprotein; GPI-anchor; Lipoprotein; Malaria; Membrane; Merozoite;
KW      Polypeptide; Repeat; Signal.
FT      SIGNAL      1..19      Potential.
FT      CHAIN      20..1680      Merozoite surface protein 1.
FT      PROPEP      1681..1701      Removed in mature form (By similarity).
FT      LIPID      1680..1680      GPI-anchor amidated serine (By
FT                                     similarity).
FT      CARBOHYD      110..110      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      239..239      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      470..470      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      536..536      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      607..607      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      802..802      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      899..899      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      919..919      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      965..965      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      991..991      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      1089..1089      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      1196..1196      N-linked (GlcNAc...) (Potential).
FT      CARBOHYD      1588..1588      N-linked (GlcNAc...) (Potential).
SQ      SEQUENCE      1701 AA; 193720 MW; 3920B75E73J38552 CRC64;

Query Match      93.8%; Score 1942; DB 1; Length 1701;
Best Local Similarity 99.2%; Pred. No. 1.9e-89;
Matches 371; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```

```

QY      78 FLDVLESDLMQFKHISNENYIIEDSFKLNSFOKNTLLSKYKIKESVENDIKFAQEGIS 137
DB      1368 FLDVLESDLMQFKHISNENYIIEDSFKLNSFOKNTLLSKYKIKESVENDIKFAQEGIS 1427
QY      138 YFEKYLAKYKDDLESIKKYIKKEKFPSSPTTTPSPAKTDEOKKESFLEPLTNIETL 197
DB      1428 YFEKYLAKYKDDLESIKKYIKKEKFPSSPTTTPSPAKTDEOKKESFLEPLTNIETL 1487
QY      198 YNNLVNKIDYILNFKAKINDCNVEKDEAHVYITKLSDKAIDDKIDLPKNPYDFAIRK 257
DB      1488 YNNLVNKIDYILNFKAKINDCNVEKDEAHVYITKLSDKAIDDKIDLPKNNDDEAIRK 1547
QY      258 LINDDTKDMLEKGLSTGLVONFPNTIISKLEIGKFDMLNISQHCYKQCPENSGCFR 317
DB      1548 LINDDTKDMLEKGLSTGLVONFPNTIISKLEIGKFDMLNISQHCYKQCPENSGCFR 1607
QY      318 HIDEREECKCLINYOEGDKCVENPNPTCNENGGCDADATTEEDSGSRKKITCECTK 377
DB      1608 HIDEREECKCLINYOEGDKCVENPNPTCNENGGCDADATTEEDSGSRKKITCECTK 1667
QY      378 PD5YPLFDGIFCSS 391
DB      1668 PD5YPLFDGIFCSS 1681

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RESULT 9
MSPL_PLAFM
ID      MSPL_PLAFM      STANDARD;      PRT; 1701 AA.
AC      P08569;
DT      01-AUG-1988 (Rel. 08, Created)
DT      05-JUL-2004 (Rel. 44, Last sequence update)
DT      10-MAY-2005 (Rel. 47, Last annotation update)
DE      Merozoite surface protein 1 precursor (Merozoite surface antigens)
DE      (PMSA) (P190).
GN      Name=MSP-1;
OS      Plasmodium falciparum (Isolate mad20 / Papua New Guinea).
OC      Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
OX      NCBI_TaxID=70153;
[1]
RN      NUCLEOTIDE SEQUENCE.
RX      MEDLINE=88011243; PubMed=3079521;
RA      Tanabe K., Mackay M., Goman M., Scaife J.G.;
RT      "Allelic dimorphism in a surface antigen gene of the malaria parasite
RT      Plasmodium falciparum."
RL      J. Mol. Biol. 195:273-287(1987).
[2]
RN      SEQUENCE REVISION TO 821; 1220; 1403; 1569 AND 1629.
RA      Tanabe K.;
RL      Submitted (NOV-2003) to the EMBL/GenBank/DBJ databases.
[3]
RN      NUCLEOTIDE SEQUENCE OF 1-115.
RX      MEDLINE=86136024; PubMed=3004972;
RA      Mackay M., Goman M., Bone N., Hyde J.E., Scaife J., Certa U.,
RA      Stuenkelberg H., Bujard H.;
RT      "Polymorphism of the precursor for the major surface antigens of
RT      Plasmodium falciparum merozoites: studies at the genetic level."
RL      EMBD J. 4:3823-3829(1985).
CC      -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.
CC      -1- PTM: Merozoite surface antigen contain the sequence of 83 kDa, 42
CC      kDa and 19 kDa antigens which are the major surface antigens of
CC      merozoites. The maturation take place during schizont.
-----
CC      This Swiss-Prot entry is copyright. It is produced through a collaboration
CC      between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC      the European Bioinformatics Institute. There are no restrictions on its
CC      use as long as its content is in no way modified and this statement is not
CC      removed.
-----
DR      EMBL; X05624; CAA29112.2; -; Genomic_DNA.
DR      HSSP; P04933; 1CEJ.
DR      SMR; P08569; 1588-1680.
DR      InterPro; IPR006209; EGF like.
DR      InterPro; IPR010901; MSPL_C.

```

DR Pfam: PF00008; EGF, 1.
 DR Pfam: PF07462; MSP1_C; 1.
 KM Glycoprotein; GPI-anchor; Lipoprotein; Malaria; Membrane; Merozoite;
 KM Polypeptide; Repeat; Signal.
 FT SIGNAL 1 19 Potential.
 FT CHAIN 20 1680 Merozoite surface protein 1.
 FT PROPEP 1681 1701 Removed in mature form (By similarity).
 FT LIPID 1680 1680 GPI-anchor amidated serine (By similarity).

Query Match 93.8%; Score 1942; DB 1; Length 1701;
 Best Local Similarity 99.2%; Pred. No. 1,9e-89;

Matches 371; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

OY 18 AISTMDNLSGFENEVDVYIKPLAGVYRSJKQIEKNIFFPNLNDILNSRLKRRY 77
 DB 1308 AISTMDNLSGFENEVDVYIKPLAGVYRSJKQIEKNIFFPNLNDILNSRLKRRY 1367
 OY 78 FLDVLESQLMQFKHISNVEYIIEDSFKLNSQKNTLLSKYKIKESVENDIKFAQEGIS 137
 DB 1368 FLDVLESQLMQFKHISNVEYIIEDSFKLNSQKNTLLSKYKIKESVENDIKFAQEGIS 1427
 OY 138 YYEKVLAKYKDDLEIKKVIKEEKKFPSSPTTPSPAKTDEQKESKFLPLNIETL 197
 DB 1428 YYEKVLAKYKDDLEIKKVIKEEKKFPSSPTTPSPAKTDEQKESKFLPLNIETL 1487
 OY 198 YNNLVNKKIDVYLINLAKKINDCNVEKDEAHVKITLSDLKAIIDKIDLFKNPYDEAIKK 257
 DB 1488 YNNLVNKKIDVYLINLAKKINDCNVEKDEAHVKITLSDLKAIIDKIDLFKNPYDEAIKK 1547
 OY 258 LINDTKKDMIGKLLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPNSGCFR 317
 DB 1548 LINDTKKDMIGKLLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPNSGCFR 1607
 OY 318 HLDEREBCKCLNLYQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTK 377
 DB 1608 HLDEREBCKCLNLYQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTK 1667
 OY 378 PDSYPLFDGIFCSS 391
 DB 1668 PDSYPLFDGIFCSS 1681

RESULT 10

Q25722_PLAFA PRELIMINARY; PRT; 373 AA.

AC Q25722; 01-NOV-1996 (TREMBLrel. 01, Created)
 DT 01-NOV-1996 (TREMBLrel. 01, Last sequence update)
 DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)
 DE Merozoite surface protein 1, 42 kDa C-terminal region (Fragment).
 GN Name=MSP-1;
 OS Plasmodium falciparum.
 CC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
 OX NCBI_TaxID=5833;
 RN NUCLEOTIDE SEQUENCE.
 RP Shi Y.-P., Alpers M.P., Poyva M.M., Nahlen B.L., Oloo A.G., Lal A.A.;
 RA Submitted (Feb-1995) to the EMBL/GenBank/DBJ databases.

CC -I- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By similarity).
 DR EMBL: U20727; AAA62218.1; -; Genomic_DNA.
 DR HSSP: Q25976; 1081.
 DR SMR: Q25722; 281-373.
 DR GO: GO:0016020; C:membrane; IEA.
 DR GO: GO:0009405; P:pathogenesis; IEA.
 DR InterPro: IPR006209; EGF like.
 DR InterPro: IPR010901; MSP1_C.
 DR Pfam: PF00008; EGF, 1.
 DR Pfam: PF07462; MSP1_C; 1.
 DR Membrane; Merozoite.
 FT NON_TER 1
 FT NON_TER 373
 SQ SEQUENCE 373 AA; 42871 MW; D29DC2517DDE1B4A CRC64;

Query Match 93.4%; Score 1935; DB 2; Length 373;
 Best Local Similarity 98.7%; Pred. No. 8.1e-90;

Matches 368; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

OY 18 AISTMDNLSGFENEVDVYIKPLAGVYRSJKQIEKNIFFPNLNDILNSRLKRRY 77
 DB 1 AISTMDNLSGFENEVDVYIKPLAGVYRSJKQIEKNIFFPNLNDILNSRLKRRY 60
 OY 78 FLDVLESQLMQFKHISNVEYIIEDSFKLNSQKNTLLSKYKIKESVENDIKFAQEGIS 137
 DB 61 FLDVLESQLMQFKHISNVEYIIEDSFKLNSQKNTLLSKYKIKESVENDIKFAQEGIS 120
 OY 138 YYEKVLAKYKDDLEIKKVIKEEKKFPSSPTTPSPAKTDEQKESKFLPLNIETL 197
 DB 121 YYEKVLAKYKDDLEIKKVIKEEKKFPSSPTTPSPAKTDEQKESKFLPLNIETL 180
 OY 198 YNNLVNKKIDVYLINLAKKINDCNVEKDEAHVKITLSDLKAIIDKIDLFKNPYDEAIKK 257
 DB 181 YNNLVNKKIDVYLINLAKKINDCNVEKDEAHVKITLSDLKAIIDKIDLFKNPYDEAIKK 240
 OY 258 LINDTKKDMIGKLLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPNSGCFR 317
 DB 241 LINDTKKDMIGKLLSTGLVONFPNTIISKLEGFQDMLNISQHCYKQCPNSGCFR 300
 OY 318 HLDEREBCKCLNLYQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTK 377
 DB 301 HLDEREBCKCLNLYQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTK 360
 OY 378 PDSYPLFDGIFCSS 390
 DB 361 PDSYPLFDGIFCSS 373

RESULT 11

Q25727_PLAFA PRELIMINARY; PRT; 373 AA.

AC Q25727; 01-NOV-1996 (TREMBLrel. 01, Created)
 DT 01-NOV-1996 (TREMBLrel. 01, Last sequence update)
 DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)
 DE Merozoite surface protein 1, 42 kDa C-terminal region (Fragment).
 GN Name=MSP-1;
 OS Plasmodium falciparum.
 CC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
 OX NCBI_TaxID=5833;
 RN NUCLEOTIDE SEQUENCE.
 RP Shi Y.-P., Alpers M.P., Poyva M.M., Nahlen B.L., Oloo A.G., Lal A.A.;
 RA Submitted (Feb-1995) to the EMBL/GenBank/DBJ databases.
 CC -I- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By similarity).
 DR EMBL: U20732; AAA62223.1; -; Genomic_DNA.
 DR HSSP: Q25976; 1081.
 DR SMR: Q25727; 281-373.
 DR GO: GO:0016020; C:membrane; IEA.
 DR GO: GO:0009405; P:pathogenesis; IEA.
 DR InterPro: IPR006209; EGF like.

DR InterPro; IPRO10901; MSP1_C.
 DR Pfam; PF00008; EGF_1.
 DR Pfam; PF07462; MSP1_C; 1.
 KM Membrane; Merozoite.
 FT NON_TER 1
 FT NON_TER 373
 SQ SEQUENCE 373 AA; 42815 MW; A79966CF38C405C CRC64;

Query Match 93.3%; Score 1933; DB 2; Length 373;
 Best Local Similarity 98.9%; Pred. No. 1e-89;
 Matches 369; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 18 AISTVMDIILSGFENEYDVIYLLKPLAGYRSLLKQIEKNIFTFNINLNDIILNSRLKKRY 77
 DB 1 AISTVMDIILSGFENEYDVIYLLKPLAGYRSLLKQIEKNIFTFNINLNDIILNSRLKKRY 60
 QY 78 FLVDLESLLMQPKHISNNEYIIEDSFKLNSQKNTLLSKYKIKESYENDIKFAQEGIS 137
 DB 61 FLVDLESLLMQPKHISNNEYIIEDSFKLNSQKNTLLSKYKIKESYENDIKFAQEGIS 120
 QY 138 YYEKVLAKYKDDLESIKKVIKEEKEFPSSPPTTPPSPAKTDEOKKESKFLPLTNIEITL 197
 DB 121 YYEKVLAKYKDDLESIKKVIKEEKEFPSSPPTTPPSPAKTDEOKKESKFLPLTNIEITL 180
 QY 198 YNNLVNKKIDVYLINLAKKINDCNVEKDEAHVKITKLSDKAIDDKIDLFPKNPYDEALIKK 257
 DB 181 YNNLVNKKIDVYLINLAKKINDCNVEKDEAHVKITKLSDKAIDDKIDLFPKNPYDEALIKK 240
 QY 258 LINDTKKDMGLKLTSLGVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGGFR 317
 DB 241 LINDTKKDMGLKLTSLGVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGGFR 300
 QY 318 HLDERECKCLINTYKQEDKCVENPPTCNENNGCGDADATCTEBDSGSSRKKITCECTK 377
 DB 301 HLDERECKCLINTYKQEDKCVENPPTCNENNGCGDADATCTEBDSGSSRKKITCECTK 360
 QY 378 PDSYPLFDGIFCS 390
 DB 361 PDSYPLFDGIFCS 373

RESULT 12
 ID Q25978 PLAFA PRELIMINARY; PRT; 569 AA.
 AC Q25978_1
 DT 01-NOV-1996 (TRENBLrel. 01, Created)
 DT 01-NOV-1996 (TRENBLrel. 01, Last sequence update)
 DT 01-MAR-2004 (TRENBLrel. 26, Last annotation update)
 DE Major merozoite surface protein (Fragment).
 GN Name=MSP1;
 OS Plasmodium falciparum.
 OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
 NCBI_TaxID=5835;
 RN NUCLEOTIDE SEQUENCE.
 RP MEDLINE=93295445; PubMed=8515786; DOI=10.1016/0166-6851(93)90010-U;
 RA Jongwattanas S., Tanabe K., Kanbara H.;
 RT "Sequence conservation in the C-terminal part of the precursor to the
 RT major merozoite surface proteins (MSP1) of Plasmodium falciparum from
 RT field isolates."
 RL Mol. Biochem. Parasitol. 59:95-100 (1993).
 CC -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
 CC similarity).
 CC EMBL; D13511; BAA02612.1; -; Genomic_DNA.
 DR HSSP; P04933; 1CEJ.
 DR SMR; Q25978; 456-548.
 DR GO; GO:0016020; C:membrane; IEA.
 DR GO; GO:0009405; P:pathogenesis; IEA.
 DR InterPro; IPRO10901; MSP1_C.
 DR Pfam; PF00008; EGF_1.
 DR Pfam; PF07462; MSP1_C; 1.
 KM Membrane; Merozoite.

FT NON_TER 1
 SQ SEQUENCE 569 AA; 64536 MW; B8B9B63BECB1DA51 CRC64;

Query Match 93.3%; Score 1932.5; DB 2; Length 569;
 Best Local Similarity 99.2%; Pred. No. 1.7e-89;
 Matches 371; Conservative 0; Mismatches 2; Indels 1; Gaps 1;

QY 18 AISTVMDIILSGFENEYDVIYLLKPLAGYRSLLKQIEKNIFTFNINLNDIILNSRLKKRY 77
 DB 177 AISTVMDIILSGFENEYDVIYLLKPLAGYRSLLKQIEKNIFTFNINLNDIILNSRLKKRY 236
 QY 78 FLVDLESLLMQPKHISNNEYIIEDSFKLNSQKNTLLSKYKIKESYENDIKFAQEGIS 137
 DB 237 FLVDLESLLMQPKHISNNEYIIEDSFKLNSQKNTLLSKYKIKESYENDIKFAQEGIS 296
 QY 138 YYEKVLAKYKDDLESIKKVIKEEKEFPSSPPTTPPSPAKTDEOKKESKFLPLTNIEITL 197
 DB 297 YYEKVLAKYKDDLESIKKVIKEEKEFPSSPPTTPPSPAKTDEOKKESKFLPLTNIEITL 355
 QY 198 YNNLVNKKIDVYLINLAKKINDCNVEKDEAHVKITKLSDKAIDDKIDLFPKNPYDEALIKK 257
 DB 356 YNNLVNKKIDVYLINLAKKINDCNVEKDEAHVKITKLSDKAIDDKIDLFPKNPYDEALIKK 415
 QY 258 LINDTKKDMGLKLTSLGVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGGFR 317
 DB 416 LINDTKKDMGLKLTSLGVONFPNTIISKLEGFQDMLNISQHCYKQCPENSGGFR 475
 QY 318 HLDERECKCLINTYKQEDKCVENPPTCNENNGCGDADATCTEBDSGSSRKKITCECTK 377
 DB 476 HLDERECKCLINTYKQEDKCVENPPTCNENNGCGDADATCTEBDSGSSRKKITCECTK 535
 QY 378 PDSYPLFDGIFCS 391
 DB 536 PDSYPLFDGIFCS 549

RESULT 13
 ID MSP1 PLAFC STANDARD; PRT; 1726 AA.
 AC P04934;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 01-MAR-1989 (Rel. 10, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Merozoite surface protein 1 precursor (Merozoite surface antigens)
 DE (PfamSA) (P195).
 GN Name=MSP-1;
 OS Plasmodium falciparum (isolate Camp / Malaysia).
 OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
 NCBI_TaxID=5835;
 RN NUCLEOTIDE SEQUENCE OF 1-1103.
 RP MEDLINE=86205236; PubMed=3517809;
 RA Weber J.L., Leininger W.M., Lyon J.A.;
 RT "Variation in the gene encoding a major merozoite surface antigen of
 RT the human malaria parasite Plasmodium falciparum."
 RL Nucleic Acids Res. 14:3311-3323 (1986).
 RN NUCLEOTIDE SEQUENCE OF 1104-1726.
 RP MEDLINE=88143999; PubMed=3278296;
 RA Weber J.L., Sim B.K.L., Lyon J.A., Wolff R.;
 RT "Merozoite surface protein sequence from the Camp strain of the human
 RT malaria parasite Plasmodium falciparum."
 RL Nucleic Acids Res. 16:1206-1206 (1988).
 CC -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.
 CC kDa and 19 kDa antigens which are the major surface antigens of
 CC merozoites. The maturation take place during schizont.
 CC -----
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CC -----
DR EMBL: X03831; CAA27446.1; -; Genomic_DNA.
DR PIR: A23386; SAZQM.
DR HSSP: P04933; ICEJ.
DR SMR: P04934; 1613-1705.
DR InterPro: IPR006209; EGF-like.
DR InterPro: IPR010901; MSP1_C.
DR Pfam: PF00008; EGF_1.
DR Pfam: PF07462; MSP1_C; 1.
DR GlycoProtein: GPI-anchor; Lipoprotein; Malaria; Membrane; Merozoite;
KW Polyprotein; Repeat; Signal.
FT SIGNAL 1 19 Potential.
FT CHAIN 20 1705 Merozoite surface protein 1.
FT PROPEP 1706 1726 Removed in mature form (By similarity).
FT LIPID 1705 1705 GPI-anchor amidated serine (By
similarity).
FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 272 272 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 501 501 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 567 567 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 638 638 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 827 827 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 924 924 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 944 944 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 990 990 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 1016 1016 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 1114 1114 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 1221 1221 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 1613 1613 N-linked (GlcNAc...) (Potential).
SQ SEQUENCE 1726 AA; 196198 MW; DD8AD45FA352BCF3 CRC64;

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Query Match 93.2%; Score 1931; DB 1; Length 1726;
Best Local Similarity 98.7%; Pred. No. 6,8e-89;
Matches 369; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

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OY 18 AISTVMDNIIISGFENEYDVIYIKPLAGVYRSLLKKQIEKNIFFNNLNDIINSRLKKRY 77
DB 1333 AISTVMDNIIISGFENEYDVIYIKPLAGVYRSLLKKQIEKNIFFNNLNDIINSRLKKRY 1392
OY 78 FLDVLESIDLMQPKHISSENYIIEDSFKLNSQKNTLLKSYKIKESVENDIKFAQEGIS 137
DB 1333 FLDVLESIDLMQPKHISSENYIIEDSFKLNSQKNTLLKSYKIKESVENDIKFAQEGIS 1452
OY 138 YEKVLAKYKDDLESIKVYIKKEKEKFPSSPPTTPSPAKTDEQKESKFLPLTNIETL 197
DB 1453 YEKVLAKYKDDLESIKVYIKKEKEKFPSSPPTTPSPAKTDEQKESKFLPLTNIETL 1512
OY 198 YNNLVNKIDVYILINKAKINDCNVEKDEAHVYKITLSDLKAIIDKIDLPKPYDEALTK 257
DB 1513 YNNLVNKIDVYILINKAKINDCNVEKDEAHVYKITLSDLKAIIDKIDLPKPYDEALTK 1572
OY 258 LINDPTKDMIGKLTSTGLVONFPNTIISKLEGGFODMLNISQCVKQCPENSGGFR 317
DB 1573 LINDPTKDMIGKLTSTGLVONFPNTIISKLEGGFODMLNISQCVKQCPENSGGFR 1632
OY 318 HLDREBECKCLLNYKQEGDKCVENPPTCNENNGCCDADATCTEBDSGSSRRKITCECTK 377
DB 1633 HLDREBECKCLLNYKQEGDKCVENPPTCNENNGCCDADATCTEBDSGSSRRKITCECTK 1692
OY 378 PDSYPLFDGIFCSS 391
DB 1693 PDSYPLFDGIFCSS 1706

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RESULT 14
MSP1_P1AF3 STANDARD; PRT; 1682 AA.
AC P19598; Q25921;
DT 01-FEB-1991 (Rel. 17, Created)
DT 01-NOV-1997 (Rel. 35, Last annotation update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Merozoite surface protein 1 precursor (Merozoite surface antigens)
DE (P190).

```

```

GN Name=MSP-1;
OS Plasmodium falciparum (isolate ro-33 / Ghana).
OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
OX NCBI_TaxID=5834;
RN [1]
RP NUCLEOTIDE SEQUENCE OF 1-1061.
RX MEDLINE=8816657; PubMed=3327688;
RA Certa U., Rotmann D., Matile H., Reber-Liske R.;
RT "A naturally occurring gene encoding the major surface antigen
RT precursor p190 of Plasmodium falciparum lacks tripeptide repeats.";
RL EMBL J. 6:4137-4142(1987).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1032-1682.
RX MEDLINE=95354793; PubMed=7628566; DOI=10.1006/expr.1995.1091;
RA Tolle R., Bujard H., Cooper J.A.;
RT "Plasmodium falciparum: variations within the C-terminal region of
RT merozoite surface antigen-1";
Exp. Parasitol. 81:47-54(1995).
CC -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.
CC kDa and 19 kDa antigens which are the major surface antigens of
CC merozoites. The maturation take place during schizont.

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DR EMBL: M35727; AAA29715.1; -; mRNA.
DR EMBL: Y00087; CAA68280.1; -; Genomic_DNA.
DR HSSP: Z35326; CAA84555.1; -; Genomic_DNA.
DR SMR: P04933; ICEJ.
DR SMR: P19598; 1569-1661.
DR InterPro: IPR006209; EGF-like.
DR InterPro: IPR010901; MSP1_C.
DR Pfam: PF00008; EGF_1.
DR Pfam: PF07462; MSP1_C; 1.
KW Glycoprotein; GPI-anchor; Lipoprotein; Malaria; Membrane; Merozoite;
KW Polyprotein; Repeat; Signal.
FT SIGNAL 1 19 Potential.
FT CHAIN 20 1661 Merozoite surface protein 1.
FT PROPEP 1662 1682 Removed in mature form (By similarity).
FT LIPID 1661 1661 GPI-anchor amidated serine (By
similarity).
FT CARBOHYD 233 233 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 462 462 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 528 528 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 599 599 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 785 785 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 881 881 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 901 901 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 947 947 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 1071 1071 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 1178 1178 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 1569 1569 N-linked (GlcNAc...) (Potential).
SQ SEQUENCE 1682 AA; 192463 MW; C82A1E159948CAD6 CRC64;

```

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Query Match 93.2%; Score 1930.5; DB 1; Length 1682;
Best Local Similarity 98.7%; Pred. No. 7.1e-89;
Matches 369; Conservative 2; Mismatches 2; Indels 1; Gaps 1;

```

```

OY 18 AISTVMDNIIISGFENEYDVIYIKPLAGVYRSLLKKQIEKNIFFNNLNDIINSRLKKRY 77
DB 1290 AISTVMDNIIISGFENEYDVIYIKPLAGVYRSLLKKQIEKNIFFNNLNDIINSRLKKRY 1349
OY 78 FLDVLESIDLMQPKHISSENYIIEDSFKLNSQKNTLLKSYKIKESVENDIKFAQEGIS 137
DB 1350 FLDVLESIDLMQPKHISSENYIIEDSFKLNSQKNTLLKSYKIKESVENDIKFAQEGIS 1409
OY 138 YEKVLAKYKDDLESIKVYIKKEKEKFPSSPPTTPSPAKTDEQKESKFLPLTNIETL 197
DB 1410 YEKVLAKYKDDLESIKVYIKKEKEKFPSSPPTTPSPAKTDEQKESKFLPLTNIETL 1468

```


QY 198 YNNLVNKIDYVILNKAINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPFDEFAIKK 257
DB 1469 YNNLVNKIDYVILNKAINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPFDEFAIKK 1528
QY 258 LINDTKKMDLGLKLSLSTGLVONFPNTTISKLEGGFODMLNISQHCYKQCPENSGCGR 317
DB 1529 LINDTKKMDLGLKLSLSTGLVONFPNTTISKLEGGFODMLNISQHCYKQCPENSGCGR 1588
QY 318 HLDERECKCLLNTYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKKTCECTK 377
DB 1589 HLDERECKCLLNTYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKKTCECTK 1648
QY 378 PDSYPLFDGIFCSS 391
DB 1649 PDSYPLFDGIFCSS 1662

RESULT 15
Q43996 PLAFB
ID Q43996 PLAFB PRELIMINARY; PRT: 373 AA.
AC Q43996;
DT 01-JUN-1998 (TRENBLrel. 06, Created)
DT 01-JUN-1998 (TRENBLrel. 06, Last sequence update)
DT 01-MAR-2004 (TRENBLrel. 26, Last annotation update)
DE Merozoite surface protein-1 (Fragment).
GN Name=MSP-1; falciparum.
OS Plasmodium falciparum.
OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
OX NCBI_TaxID=5833;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=Kenya-2;
RX MEDLINE=98319411; PubMed=9657329; DOI=10.1016/S0166-6851(98)00010-3;
RA Qari S.H., Shi Y.P., Goldman I.F., Nahlen B.L., Tibayrenc M.,
Lai A.A.;
RT "Predicted and observed alleles of Plasmodium falciparum merozoite
surface protein-1 (MSP-1), a potential malaria vaccine antigen.";
RL Mol. Biochem. Parasitol. 92:241-252(1998).
CC -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
similarity).
CC EMBL: AF040568; AAC39098.1; -; Genomic_DNA.
DR HSSP: Q25976; IOB1.
DR SMR: Q43996; 281-373.
DR GO: GO:0016020; C:membrane; IEA.
DR GO: GO:0009405; P:pathogenesis; IEA.
DR InterPro: IPR006209; EGF-like.
DR InterPro: IPR010901; MSP1_C.
DR Pfam: PF00008; EGF; 1.
DR Pfam: PF07462; MSP1_C; 1.
DR Membrane; Merozoite.
KM NON_TER 1
FT NON_TER 1
SQ SEQUENCE 373 AA; 42903 MW; 86CD4B721B605A5F CRC64;

Query Match 93.1%; Score 1929; DB 2; Length 373;
Best Local Similarity 98.9%; Pred. No. 1.6e-89;
Matches 369; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 18 AISVTMDNIIISGFENEVDVYILKPLAGVRSLSKQIEKNIIFTFNINLNDILNSRLKRRY 77
DB 1 AISVTMDNIIISGFENEVDVYILKPLAGVRSLSKQIEKNIIFTFNINLNDILNSRLKRRY 60
QY 78 FLVDIESDLMOFKHISNNEYIIEDSFKLINSQKNTLLKSYKIKESVENDIKFAQEGIS 137
DB 61 FLVDIESDLMOFKHISNNEYIIEDSFKLINSQKNTLLKSYKIKESVENDIKFAQEGIS 120
QY 138 YYEKYLAKYKODLESIKKVIKEKEKPPSPPTTSPSPAKTDEQKESKFLPLTNIEFL 197
DB 121 YYEKYLAKYKODLESIKKVIKEKEKPPSPPTTSPSPAKTDEQKESKFLPLTNIEFL 180
QY 198 YNNLVNKIDYVILNKAINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPFDEFAIKK 257

DB 181 YNNLVNKIDYVILNKAINDCNVEKDEAHVKITKLSDLKAIDDKIDLFKNPFDEFAIKK 240
QY 258 LINDTKKMDLGLKLSLSTGLVONFPNTTISKLEGGFODMLNISQHCYKQCPENSGCGR 317
DB 241 LINDTKKMDLGLKLSLSTGLVONFPNTTISKLEGGFODMLNISQHCYKQCPENSGCGR 300
QY 318 HLDERECKCLLNTYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKKTCECTK 377
DB 301 HLDERECKCLLNTYKQEGDKCVENPNPTCNENNGCCDADATCTEEDSGSSRRKKTCECTK 360
QY 378 PDSYPLFDGIFCS 390
DB 361 PDSYPLFDGIFCS 373

Search completed: May 5, 2006, 00:24:32
Job time : 233 secs

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GenCore version 5.1.7
Copyright (c) 1993 - 2006 Bioacceleration Ltd.

OM protein - protein search, using sw model

Run on: May 5, 2006, 00:25:32 ; Search time 168 Seconds
(without alignments)
972.448 Million cell updates/sec

Title: US-10-057-532a-7
2071
Perfect score: 1 MAHHHHHPGSGSGTMAIS.....TCCTKPDSPYLPDGIKCS 391
Sequence:

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications_AA Main:
1: /cgn2_6/ptodata/1/pubpa/US07_PUBCOMB.pep.*
2: /cgn2_6/ptodata/1/pubpa/US08_PUBCOMB.pep.*
3: /cgn2_6/ptodata/1/pubpa/US09_PUBCOMB.pep.*
4: /cgn2_6/ptodata/1/pubpa/US10_PUBCOMB.pep.*
5: /cgn2_6/ptodata/1/pubpa/US10_PUBCOMB.pep.*
6: /cgn2_6/ptodata/1/pubpa/US11_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match length	ID	Description
1	2071	100.0	391 4 US-10-057-531A-7	Sequence 7, Appli
2	2071	100.0	391 4 US-10-057-531A-7	Sequence 7, Appli
3	2055	99.2	393 4 US-10-057-531A-3	Sequence 3, Appli
4	2055	99.2	393 4 US-10-057-531A-3	Sequence 3, Appli
5	2008.5	97.0	431 4 US-10-057-531A-2	Sequence 2, Appli
6	2008.5	97.0	431 4 US-10-057-531A-2	Sequence 2, Appli
7	2008.5	97.0	546 4 US-10-057-531A-1	Sequence 1, Appli
8	2008.5	97.0	546 4 US-10-057-531A-1	Sequence 1, Appli
9	1968	95.0	383 4 US-10-057-531A-5	Sequence 5, Appli
10	1968	95.0	383 4 US-10-057-531A-5	Sequence 5, Appli
11	1965	94.9	394 3 US-09-978-756-3	Sequence 3, Appli
12	1931	93.2	394 4 US-10-062-809-2	Sequence 2, Appli
13	1931	93.2	394 4 US-10-062-809-2	Sequence 2, Appli
14	1931	93.2	394 4 US-10-062-809-2	Sequence 2, Appli
15	1928	93.1	396 4 US-10-062-809-18	Sequence 18, Appli
16	1928	93.1	396 4 US-10-062-809-18	Sequence 18, Appli
17	1928	93.1	402 4 US-10-098-514-14	Sequence 14, Appli
18	1928	93.1	402 4 US-10-062-809-16	Sequence 16, Appli
19	1928	93.1	402 4 US-10-062-809-16	Sequence 16, Appli
20	1928	93.1	402 4 US-10-062-809-16	Sequence 16, Appli
21	1921	92.8	394 4 US-10-062-809-3	Sequence 3, Appli
22	1921	92.8	394 4 US-10-062-809-3	Sequence 3, Appli
23	1921	92.8	394 4 US-10-062-809-3	Sequence 3, Appli
24	1921	92.8	394 4 US-10-062-809-3	Sequence 3, Appli
25	1900	91.7	383 4 US-10-098-514-4	Sequence 4, Appli
26	1254.5	60.6	371 4 US-10-098-514-2	Sequence 2, Appli
27	1250.5	60.4	371 4 US-10-404-667-2	Sequence 2, Appli
			371 4 US-10-404-667-5	Sequence 5, Appli

28	1166.5	56.3	1602 5 US-10-954-924-7	Sequence 7, Appli
29	1166.5	56.3	1621 5 US-10-954-924-5	Sequence 5, Appli
30	1166.5	56.3	1639 5 US-10-087-464-10	Sequence 10, Appli
31	1166.5	56.3	1639 5 US-10-954-924-3	Sequence 3, Appli
32	1166.5	56.3	376 3 US-09-978-756-2	Sequence 2, Appli
33	1165.5	56.3	376 4 US-10-087-464-34	Sequence 34, Appli
34	1165.5	56.3	378 4 US-10-087-464-11	Sequence 11, Appli
35	1163.5	56.2	384 4 US-10-062-809-8	Sequence 8, Appli
36	1163.5	56.2	384 5 US-10-935-793-8	Sequence 8, Appli
37	1163.5	56.2	384 5 US-10-925-385-8	Sequence 8, Appli
38	1161.5	56.1	355 4 US-10-677-641-8	Sequence 8, Appli
39	1161.5	56.1	355 5 US-10-949-975-9	Sequence 9, Appli
40	1161.5	56.1	355 6 US-11-140-676-9	Sequence 9, Appli
41	1161.5	56.1	361 5 US-10-949-975-10	Sequence 10, Appli
42	1161.5	56.1	361 6 US-11-140-676-10	Sequence 10, Appli
43	1154.5	55.7	379 5 US-10-949-975-11	Sequence 11, Appli
44	1154.5	55.7	379 6 US-11-140-676-11	Sequence 11, Appli
45	1040	50.2	377 4 US-10-062-809-5	Sequence 5, Appli

ALIGNMENTS

RESULT 1
US-10-057-531A-7
Sequence 7, Application US/10057531A
Publication No. US20030161838A1
GENERAL INFORMATION:
APPLICANT: Lyon, Jeffrey A.
TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
FILE REFERENCE: 003/241/SAP
CURRENT APPLICATION NUMBER: US/10/057,531A
CURRENT FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 7
LENGTH: 391
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: E. coli expressed P. falciparum MSP-142 (3D7)
US-10-057-531A-7

Query Match 100.0%; Score 2071; DB 4; Length 391;
Best Local Similarity 100.0%; Pred. No. 2.1e-126;
Matches 391; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	1	MAHHHHHPGSGSGTMAISVTMDNISGFENEVDVILKPLAGYRRLKQIENITFE	60
DB	1	MAHHHHHPGSGSGTMAISVTMDNISGFENEVDVILKPLAGYRRLKQIENITFE	60
QY	61	NLNINDIINSRLKRRKYLVDLESIMQFRIHSSEYIIEOSFKLNSOQNTLKSXY	120
DB	61	NLNINDIINSRLKRRKYLVDLESIMQFRIHSSEYIIEOSFKLNSOQNTLKSXY	120
QY	121	IKESVENDIKFAOEGISYKVLAKYKDDLESIKKVIKEEKEKPPSSPTTSPAKTDE	180
DB	121	IKESVENDIKFAOEGISYKVLAKYKDDLESIKKVIKEEKEKPPSSPTTSPAKTDE	180
QY	181	OKESKEFLPFLTNITETLYNNLVNKIDYLIUKAKINDCNVEKDAHYKITLSLKAID	240
DB	181	OKESKEFLPFLTNITETLYNNLVNKIDYLIUKAKINDCNVEKDAHYKITLSLKAID	240
QY	241	DKIDLFKPYDFEALIKKLINDTKDMGKLSGLVONPNTIISKLEGFQDMNIS	300
DB	241	DKIDLFKPYDFEALIKKLINDTKDMGKLSGLVONPNTIISKLEGFQDMNIS	300

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QY 301 OHQCVKQCPENSGCFRHLDERECKCLINYKQEGDKCVENPPTCNENNGCCDADATCT 360
DB 301 OHQCVKQCPENSGCFRHLDERECKCLINYKQEGDKCVENPPTCNENNGCCDADATCT 360
QY 361 EEDSGSSRRKKTTCCTCKPDSPYPLFDGIFCSS 391
DB 361 EEDSGSSRRKKTTCCTCKPDSPYPLFDGIFCSS 391

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RESULT 2

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US-10-057-532A-7
; Sequence 7, Application US/10057532A
; Publication No. US20030161839A1
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; APPLICANT: Cohen, Joe D.
; APPLICANT: Voss, Gerald
; TITLE OF INVENTION: Recombinant P. falciparum Merozoite Protein-142 Vaccine
; FILE REFERENCE: 003/238/SAP
; CURRENT FILING DATE: 2001-01-25
; PRIOR FILING DATE: 2001-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Apple Macintosh Microsoft Word 6.0
; SEQ ID NO 7
; LENGTH: 391
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: E. coli expressed P. falciparum MSP-142 (3D7)
US-10-057-532A-7

```

```

Query Match 100.0%; Score 2071; DB 4; Length 391;
Best Local Similarity 100.0%; Pred. No. 2.1e-126;
Matches 391; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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```

QY 1 MAHHHHHPPGSGSGTMAISVTMDNISGFENEYVYIKPLAGYRSIKKQIEKNITFE 60
DB 1 MAHHHHHPPGSGSGTMAISVTMDNISGFENEYVYIKPLAGYRSIKKQIEKNITFE 60
QY 61 NLNLDILNSRLKKRYFLDVLESDLMQFKHISNBYIIEDSFKLNSQKNTLLKSY 120
DB 61 NLNLDILNSRLKKRYFLDVLESDLMQFKHISNBYIIEDSFKLNSQKNTLLKSY 120
QY 121 IKESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKTDE 180
DB 121 IKESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKTDE 180
QY 121 IKESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKTDE 180
DB 121 IKESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKTDE 180
QY 181 OKKESKFLPFLNITETLNNLVNKKIDYILNKAKINDCNVEKDEAHVKITLSDLK 240
DB 181 OKKESKFLPFLNITETLNNLVNKKIDYILNKAKINDCNVEKDEAHVKITLSDLK 240
QY 241 DKIDLFKNPYDEFAIKKLINDTKKDLGKLSGLVQNFPTIISKLEGFQDMLNS 300
DB 241 DKIDLFKNPYDEFAIKKLINDTKKDLGKLSGLVQNFPTIISKLEGFQDMLNS 300
QY 301 OHQCVKQCPENSGCFRHLDERECKCLINYKQEGDKCVENPPTCNENNGCCDADATCT 360
DB 301 OHQCVKQCPENSGCFRHLDERECKCLINYKQEGDKCVENPPTCNENNGCCDADATCT 360
QY 361 EEDSGSSRRKKTTCCTCKPDSPYPLFDGIFCSS 391
DB 361 EEDSGSSRRKKTTCCTCKPDSPYPLFDGIFCSS 391

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RESULT 3

```

US-10-057-531A-3
; Sequence 3, Application US/10057531A
; Publication No. US20030161838A1

```

```

; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
; FILE REFERENCE: 003/241/SAP
; CURRENT FILING DATE: 2002-01-25
; PRIOR FILING DATE: 2001-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Apple Macintosh Microsoft Word 6.0
; SEQ ID NO 3
; LENGTH: 393
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein
US-10-057-531A-3

```

```

Query Match 99.2%; Score 2055; DB 4; Length 393;
Best Local Similarity 99.2%; Pred. No. 2.3e-125;
Matches 390; Conservative 0; Mismatches 1; Indels 2; Gaps 1;

```

```

QY 1 MAHHHHHPPGSGSGTMAISVTMDNISGFENEYVYIKPLAGYRSIKKQIEKNITFE 58
DB 1 MAHHHHHPPGSGSGTMAISVTMDNISGFENEYVYIKPLAGYRSIKKQIEKNITFE 60
QY 59 TPNLNDILNSRLKKRYFLDVLESDLMQFKHISNBYIIEDSFKLNSQKNTLLKSY 118
DB 59 TPNLNDILNSRLKKRYFLDVLESDLMQFKHISNBYIIEDSFKLNSQKNTLLKSY 120
QY 61 IKESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKT 178
DB 61 IKESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKT 180
QY 119 KYIESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKT 178
DB 119 KYIESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKT 180
QY 121 KYIESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKT 180
DB 121 KYIESVENDIKFAOEGISYIEKVLAKYKDLSEIKVIEKEKEKFPSSPTTPSPAKT 180
QY 179 DEOKESKFLPFLNITETLNNLVNKKIDYILNKAKINDCNVEKDEAHVKITLSDLK 238
DB 179 DEOKESKFLPFLNITETLNNLVNKKIDYILNKAKINDCNVEKDEAHVKITLSDLK 240
QY 239 IDDKIDLFKNPYDEFAIKKLINDTKKDLGKLSGLVQNFPTIISKLEGFQDMLN 298
DB 239 IDDKIDLFKNPYDEFAIKKLINDTKKDLGKLSGLVQNFPTIISKLEGFQDMLN 300
QY 299 ISOHQCVKQCPENSGCFRHLDERECKCLINYKQEGDKCVENPPTCNENNGCCDADAT 358
DB 299 ISOHQCVKQCPENSGCFRHLDERECKCLINYKQEGDKCVENPPTCNENNGCCDADAT 360
QY 359 CTEEDSGSSRRKKTTCCTCKPDSPYPLFDGIFCSS 391
DB 359 CTEEDSGSSRRKKTTCCTCKPDSPYPLFDGIFCSS 393

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RESULT 4

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US-10-057-532A-3
; Sequence 3, Application US/10057532A
; Publication No. US20030161839A1
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; APPLICANT: Cohen, Joe D.
; APPLICANT: Voss, Gerald
; TITLE OF INVENTION: Recombinant P. falciparum Merozoite Protein-142 Vaccine
; FILE REFERENCE: 003/238/SAP
; CURRENT FILING DATE: 2001-01-25
; PRIOR FILING DATE: 2001-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564

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NUMBER OF SEQ ID NOS: 12
 ; SOFTWARE: Apple Macintosh Microsoft Word 6.0
 ; SEQ ID NO 3
 ; LENGTH: 393
 ; TYPE: PRT
 ; ORGANISM: Artificial sequence
 ; FEATURE:
 ; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein Sequence in
 US-10-057-532A-3

Query Match 99.2%; Score 2055; DB 4; Length 393;
 Best Local Similarity 99.2%; Pred. No. 2.3e-125;
 Matches 390; Conservative 0; Mismatches 1; Indels 2; Gaps 1;

QY 1 MAHHHHHPGSG--SGGTMAISVTMDNLSGFENEVDYIYKPLAGVRSLSKKQIEKNIF 58
 |||||
 DB 1 MAHHHHHPGSGISBRGTMAISVTMDNLSGFENEVDYIYKPLAGVRSLSKKQIEKNIF 60
 QY 59 TFNLNLDILNSRLKRRKYFLDVLSEDLMOFGHISSENYIIESDFKLNSBQKNTLKSXY 118
 |||||
 DB 61 TFNLNLDILNSRLKRRKYFLDVLSEDLMOFGHISSENYIIESDFKLNSBQKNTLKSXY 120
 QY 119 KYIKESVENDIKFAOEGISYEKVLAKYKDLESIKKVIKEKEKFPSSPPTPPSPAKT 178
 |||||
 DB 121 KYIKESVENDIKFAOEGISYEKVLAKYKDLESIKKVIKEKEKFPSSPPTPPSPAKT 180
 QY 179 DEOKKESFPLPNTIETLYNNLVNKIDYILNKAINDCNVEKDEAHVKITKLSDLKA 238
 |||||
 DB 181 DEOKKESFPLPNTIETLYNNLVNKIDYILNKAINDCNVEKDEAHVKITKLSDLKA 240
 QY 239 IDDKIDLFPKNPYDFAIKKLINDDTKMDLKGKLSLTVQNPNTIISKLEGFQDMLN 298
 |||||
 DB 241 IDDKIDLFPKNPYDFAIKKLINDDTKMDLKGKLSLTVQNPNTIISKLEGFQDMLN 300
 QY 299 ISQHOCVKKQCPENSGCFRHLDERECKCLNLYKQEGKCVENPPTCNENNGCDADAT 358
 |||||
 DB 301 ISQHOCVKKQCPENSGCFRHLDERECKCLNLYKQEGKCVENPPTCNENNGCDADAT 360
 QY 359 CTEBDSGSSRRKKTCTECPKPSYPLFDGIFCSS 391
 |||||
 DB 361 CTEBDSGSSRRKKTCTECPKPSYPLFDGIFCSS 393

RESULT 5

US-10-057-531A-2
 ; Sequence 2, Application US/10057531A
 ; Publication No. US20030161838A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Lyon, Jeffrey A.
 ; APPLICANT: Angov, Evelina
 ; TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
 ; TITLE OF INVENTION: Protein-142 Vaccine
 ; FILE REFERENCE: 003/241/SAP
 ; CURRENT APPLICATION NUMBER: US/10/057,531A
 ; CURRENT FILING DATE: 2002-01-25
 ; PRIOR APPLICATION NUMBER: US 60/264,535
 ; PRIOR FILING DATE: 2001-01-26
 ; PRIOR APPLICATION NUMBER: US 60/347,564
 ; PRIOR FILING DATE: 2001-10-26
 ; NUMBER OF SEQ ID NOS: 12
 ; SOFTWARE: Apple Macintosh Microsoft Word 6.0
 ; SEQ ID NO 2
 ; LENGTH: 431
 ; TYPE: PRT
 ; ORGANISM: Artificial sequence
 ; FEATURE:
 ; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein
 ; OTHER INFORMATION: Sequence in pET(50)MSP1-42
 US-10-057-531A-2

Query Match 97.0%; Score 2008.5; DB 4; Length 431;
 Best Local Similarity 89.5%; Pred. No. 2.7e-122;
 Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;

QY 3 HHHHHHPGSG-----SGSGTMAISV 21
 |||||
 DB 2 HHHHHHSGLVPRSGMKETAARKFERQHMDSPDLGTDDDDKAMADIGSISBRGTMAISV 61
 QY 22 TMDNLSGFENEVDYIYKPLAGVRSLSKKQIEKNIFPNLNDILNSRLKRRKYFLDV 81
 |||||
 DB 62 TMDNLSGFENEVDYIYKPLAGVRSLSKKQIEKNIFPNLNDILNSRLKRRKYFLDV 121
 QY 82 LESDLMQFKHISSENYIIESDFKLNSBQKNTLKSXYIKESVENDIKFAOEGISYEK 141
 |||||
 DB 122 LESDLMQFKHISSENYIIESDFKLNSBQKNTLKSXYIKESVENDIKFAOEGISYEK 181
 QY 142 VLAKYKDLESIKKVIKEKEKFPSSPPTPPSPAKTDEOKKESFPLPNTIETLYNNL 201
 |||||
 DB 182 VLAKYKDLESIKKVIKEKEKFPSSPPTPPSPAKTDEOKKESFPLPNTIETLYNNL 241
 QY 202 VNKIDYILNKAINDCNVEKDEAHVKITKLSDLKAIDDKIDLFPKNPYDFAIKKLIND 261
 |||||
 DB 242 VNKIDYILNKAINDCNVEKDEAHVKITKLSDLKAIDDKIDLFPKNPYDFAIKKLIND 301
 QY 262 DTKMDLKGKLSLTVQNPNTIISKLEGFQDMLNISOHCVKKQCPENSGCFRHLDE 321
 |||||
 DB 302 DTKMDLKGKLSLTVQNPNTIISKLEGFQDMLNISOHCVKKQCPENSGCFRHLDE 361
 QY 322 REECKCLNLYKQEGKCVENPPTCNENNGCDADATCTEBDSGSSRRKKTCTECPKPSY 381
 |||||
 DB 362 REECKCLNLYKQEGKCVENPPTCNENNGCDADATCTEBDSGSSRRKKTCTECPKPSY 421
 QY 382 PLFDGIFCSS 391
 |||||
 DB 422 PLFDGIFCSS 431

RESULT 6

US-10-057-532A-2
 ; Sequence 2, Application US/10057532A
 ; Publication No. US20030161839A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Lyon, Jeffrey A.
 ; APPLICANT: Angov, Evelina
 ; APPLICANT: Cohen, Joe D.
 ; APPLICANT: Voss, Gerald
 ; TITLE OF INVENTION: Recombinant P. falciparum Merozoite Protein-142 Vaccine
 ; FILE REFERENCE: 003/238/SAP
 ; CURRENT APPLICATION NUMBER: US/10/057,532A
 ; CURRENT FILING DATE: 2001-01-25
 ; PRIOR APPLICATION NUMBER: US 60/264,535
 ; PRIOR FILING DATE: 2001-01-26
 ; PRIOR APPLICATION NUMBER: US 60/347,564
 ; PRIOR FILING DATE: 2001-10-26
 ; NUMBER OF SEQ ID NOS: 12
 ; SOFTWARE: Apple Macintosh Microsoft Word 6.0
 ; SEQ ID NO 2
 ; LENGTH: 431
 ; TYPE: PRT
 ; ORGANISM: Artificial sequence
 ; FEATURE:
 ; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein Sequence in
 ; OTHER INFORMATION: pET(50)MSP1-42
 US-10-057-532A-2

Query Match 97.0%; Score 2008.5; DB 4; Length 431;
 Best Local Similarity 89.5%; Pred. No. 2.7e-122;
 Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;

QY 3 HHHHHHPGSG-----SGSGTMAISV 21
 |||||
 DB 2 HHHHHHSGLVPRSGMKETAARKFERQHMDSPDLGTDDDDKAMADIGSISBRGTMAISV 61
 QY 22 TMDNLSGFENEVDYIYKPLAGVRSLSKKQIEKNIFPNLNDILNSRLKRRKYFLDV 81
 |||||
 DB 62 TMDNLSGFENEVDYIYKPLAGVRSLSKKQIEKNIFPNLNDILNSRLKRRKYFLDV 121

QY 82 LESDLMQFKHISSENYIIEDSFKILNSQKNTLLSKYKIKESVENDIKFAQEGISYSEK 141
DB 122 LESDLMQFKHISSENYIIEDSFKILNSQKNTLLSKYKIKESVENDIKFAQEGISYSEK 181
QY 142 VLAKYKDDLESIKKYIKKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETLYNNL 201
DB 182 VLAKYKDDLESIKKYIKKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETLYNNL 241
QY 202 VNKIDVYLINLAKINCNDVKEDEAHVKITKLSDLKALDDKIDLPKNPYDEFAIKKLIND 261
DB 242 VNKIDVYLINLAKINCNDVKEDEAHVKITKLSDLKALDDKIDLPKNPYDEFAIKKLIND 301
QY 262 DTKDMLGKLLSTGLVQNFPTIISKLEGFQDMLNISOHCYVKQCPENSGCFRHLDE 321
DB 302 DTKDMLGKLLSTGLVQNFPTIISKLEGFQDMLNISOHCYVKQCPENSGCFRHLDE 361
QY 322 REBCKCLNLYKQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTKPDY 381
DB 362 REBCKCLNLYKQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTKPDY 421
QY 382 PLFDGIFCSS 391
DB 422 PLFDGIFCSS 431

RESULT 7

US-10-057-531A-1
; Sequence 1, Application US/10057531A
; Publication No. US20030161838A1
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
; TITLE OF INVENTION: Protein-142 Vaccine
; FILE REFERENCE: 003/241/SAP
; CURRENT APPLICATION NUMBER: US/10/057,531A
; PRIOR FILING DATE: 2002-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564
; PRIOR FILING DATE: 2001-10-26
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Apple Macintosh Microsoft Word 6.0
; SEQ ID NO 1
; LENGTH: 546
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein
; OTHER INFORMATION: Sequence in pET-Trx42
US-10-057-531A-1

Query Match 97.0%; Score 2008.5; DB 4; Length 546;
Best Local Similarity 89.5%; Pred. No. 3.6e-122;
Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;

QY 3 HHHHHHPG-----SGSGTMAISV 21
DB 117 HHHHHSSGLVPRGSMKETAAKFERQHMDSPLDGTDDDDKAMADISIEGRGTMAISV 176
QY 22 TMDNLSGFENEYDVYIKPLAGVYRSJKQIEKNIFFFNLLNDILNSRLKRRYFLDV 81
DB 177 TMDNLSGFENEYDVYIKPLAGVYRSJKQIEKNIFFFNLLNDILNSRLKRRYFLDV 236
QY 82 LESDLMQFKHISSENYIIEDSFKILNSQKNTLLSKYKIKESVENDIKFAQEGISYSEK 141
DB 237 LESDLMQFKHISSENYIIEDSFKILNSQKNTLLSKYKIKESVENDIKFAQEGISYSEK 296
QY 142 VLAKYKDDLESIKKYIKKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETLYNNL 201
DB 297 VLAKYKDDLESIKKYIKKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETLYNNL 356

QY 202 VNKIDVYLINLAKINCNDVKEDEAHVKITKLSDLKALDDKIDLPKNPYDEFAIKKLIND 261
DB 357 VNKIDVYLINLAKINCNDVKEDEAHVKITKLSDLKALDDKIDLPKNPYDEFAIKKLIND 416
QY 262 DTKDMLGKLLSTGLVQNFPTIISKLEGFQDMLNISOHCYVKQCPENSGCFRHLDE 321
DB 417 DTKDMLGKLLSTGLVQNFPTIISKLEGFQDMLNISOHCYVKQCPENSGCFRHLDE 476
QY 322 REBCKCLNLYKQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTKPDY 381
DB 477 REBCKCLNLYKQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTKPDY 536
QY 382 PLFDGIFCSS 391
DB 537 PLFDGIFCSS 546

RESULT 8

US-10-057-532A-1
; Sequence 1, Application US/10057532A
; Publication No. US20030161839A1
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; APPLICANT: Cohen, Joe D.
; APPLICANT: Vose, Gerald
; TITLE OF INVENTION: Recombinant P. falciparum Merozoite Protein-142 Vaccine
; FILE REFERENCE: 003/238/SAP
; CURRENT APPLICATION NUMBER: US/10/057,532A
; PRIOR FILING DATE: 2001-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564
; PRIOR FILING DATE: 2001-10-26
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Apple Macintosh Microsoft Word 6.0
; SEQ ID NO 1
; LENGTH: 546
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein Sequence in I
US-10-057-532A-1

Query Match 97.0%; Score 2008.5; DB 4; Length 546;
Best Local Similarity 89.5%; Pred. No. 3.6e-122;
Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;

QY 3 HHHHHHPG-----SGSGTMAISV 21
DB 117 HHHHHSSGLVPRGSMKETAAKFERQHMDSPLDGTDDDDKAMADISIEGRGTMAISV 176
QY 22 TMDNLSGFENEYDVYIKPLAGVYRSJKQIEKNIFFFNLLNDILNSRLKRRYFLDV 81
DB 177 TMDNLSGFENEYDVYIKPLAGVYRSJKQIEKNIFFFNLLNDILNSRLKRRYFLDV 236
QY 82 LESDLMQFKHISSENYIIEDSFKILNSQKNTLLSKYKIKESVENDIKFAQEGISYSEK 141
DB 237 LESDLMQFKHISSENYIIEDSFKILNSQKNTLLSKYKIKESVENDIKFAQEGISYSEK 296
QY 142 VLAKYKDDLESIKKYIKKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETLYNNL 201
DB 297 VLAKYKDDLESIKKYIKKEKEKFPSSPTTPPSPAKTDEQKESKFLPLTNIETLYNNL 356
QY 202 VNKIDVYLINLAKINCNDVKEDEAHVKITKLSDLKALDDKIDLPKNPYDEFAIKKLIND 261
DB 357 VNKIDVYLINLAKINCNDVKEDEAHVKITKLSDLKALDDKIDLPKNPYDEFAIKKLIND 416
QY 262 DTKDMLGKLLSTGLVQNFPTIISKLEGFQDMLNISOHCYVKQCPENSGCFRHLDE 321
DB 417 DTKDMLGKLLSTGLVQNFPTIISKLEGFQDMLNISOHCYVKQCPENSGCFRHLDE 476
QY 322 REBCKCLNLYKQEGDKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCECTKPDY 381

Db 477 REECCKLNVKQEGDKVCVENPNTCNENNGGCDADATCTEEDSGSSRKKTCTECPDST 536
QY 382 PLFDGIFCSS 391
Db 537 PLFDGIFCSS 546

RESULT 9

US-10-057-531A-5
; Sequence 5, Application US/10057531A
; Publication No. US20030161838A1
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
; FILE REFERENCE: 003/241/SAP
; CURRENT APPLICATION NUMBER: US/10/057,531A
; PRIOR FILING DATE: 2001-01-26
; PRIOR FILING DATE: 2002-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Apple Macintosh Microsoft Word 6.0
; SEQ ID NO 5
; LENGTH: 383
; TYPE: PRT
; ORGANISM: Plasmodium falciparum 3D7 MSP142
US-10-057-531A-5

Query Match 95.0%; Score 1968; DB 4; Length 383;
Best Local Similarity 99.2%; Pred. No. 1e-119;

Matches 376; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 13 GSGTMAISVTMDNIIISGFENEYDVYILKPLAGVYRSKKQIEKNITFTFNLINDILNSRL 72
Db 5 GGTMAISVTMDNIIISGFENEYDVYILKPLAGVYRSKKQIEKNITFTFNLINDILNSRL 64
QY 73 KKRKYFLDVLBSDLNQPFHISSENEYIIEDSFQLNSEQNTLLKSYKIKESVENDIKFA 132
Db 65 KKRKYFLDVLBSDLNQPFHISSENEYIIEDSFQLNSEQNTLLKSYKIKESVENDIKFA 124
QY 133 QEGISYERKVLAKYKDDLESIKVIKEKEKPPSPPTTPSPAKTDEQKESKFLPLT 192
Db 125 QEGISYERKVLAKYKDDLESIKVIKEKEKPPSPPTTPSPAKTDEQKESKFLPLT 184
QY 193 NIETLYNNLVNKIDYLLNLKAKINDCNVEKDEAHVKTITKSLDKAIDKIDLFKNPYDF 252
Db 185 NIETLYNNLVNKIDYLLNLKAKINDCNVEKDEAHVKTITKSLDKAIDKIDLFKNPYDF 244
QY 253 EAIKKLINDDTKKDMLGKLLSTGLVQNPNTIISKLIEGKFDMLNISQHCVCVKKQCPEN 312
Db 245 EAIKKLINDDTKKDMLGKLLSTGLVQNPNTIISKLIEGKFDMLNISQHCVCVKKQCPEN 304
QY 313 SGCFPHLDREBECKCLLVYKQEGDKVCVENPNTCNENNGGCDADATCTEEDSGSSRKKT 372
Db 305 SGCFPHLDREBECKCLLVYKQEGDKVCVENPNTCNENNGGCDADATCTEEDSGSSRKKT 364
QY 373 CECTKPDSTPLFDGIFCSS 391
Db 365 CECTKPDSTPLFDGIFCSS 383

RESULT 10

US-10-057-532A-5
; Sequence 5, Application US/10057532A
; Publication No. US20030161839A1
; GENERAL INFORMATION:
; APPLICANT: Lyon, Jeffrey A.
; APPLICANT: Angov, Evelina
; APPLICANT: Cohen, Joe D.

; APPLICANT: Voss, Gerald
; TITLE OF INVENTION: Recombinant P. falciparum Merozoite Protein-142 Vaccine
; FILE REFERENCE: 003/238/SAP
; CURRENT APPLICATION NUMBER: US/10/057,532A
; PRIOR FILING DATE: 2001-01-25
; PRIOR APPLICATION NUMBER: US 60/264,535
; PRIOR FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: US 60/347,564
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Apple Macintosh Microsoft Word 6.0
; SEQ ID NO 5
; LENGTH: 383
; TYPE: PRT
; ORGANISM: Plasmodium falciparum 3D7 MSP142
US-10-057-532A-5

Query Match 95.0%; Score 1968; DB 4; Length 383;
Best Local Similarity 99.2%; Pred. No. 1e-119;

Matches 376; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 13 GSGTMAISVTMDNIIISGFENEYDVYILKPLAGVYRSKKQIEKNITFTFNLINDILNSRL 72
Db 5 GGTMAISVTMDNIIISGFENEYDVYILKPLAGVYRSKKQIEKNITFTFNLINDILNSRL 64
QY 73 KKRKYFLDVLBSDLNQPFHISSENEYIIEDSFQLNSEQNTLLKSYKIKESVENDIKFA 132
Db 65 KKRKYFLDVLBSDLNQPFHISSENEYIIEDSFQLNSEQNTLLKSYKIKESVENDIKFA 124
QY 133 QEGISYERKVLAKYKDDLESIKVIKEKEKPPSPPTTPSPAKTDEQKESKFLPLT 192
Db 125 QEGISYERKVLAKYKDDLESIKVIKEKEKPPSPPTTPSPAKTDEQKESKFLPLT 184
QY 193 NIETLYNNLVNKIDYLLNLKAKINDCNVEKDEAHVKTITKSLDKAIDKIDLFKNPYDF 252
Db 185 NIETLYNNLVNKIDYLLNLKAKINDCNVEKDEAHVKTITKSLDKAIDKIDLFKNPYDF 244
QY 253 EAIKKLINDDTKKDMLGKLLSTGLVQNPNTIISKLIEGKFDMLNISQHCVCVKKQCPEN 312
Db 245 EAIKKLINDDTKKDMLGKLLSTGLVQNPNTIISKLIEGKFDMLNISQHCVCVKKQCPEN 304
QY 313 SGCFPHLDREBECKCLLVYKQEGDKVCVENPNTCNENNGGCDADATCTEEDSGSSRKKT 372
Db 305 SGCFPHLDREBECKCLLVYKQEGDKVCVENPNTCNENNGGCDADATCTEEDSGSSRKKT 364
QY 373 CECTKPDSTPLFDGIFCSS 391
Db 365 CECTKPDSTPLFDGIFCSS 383

RESULT 11

US-09-978-756-3
; Sequence 3, Application US/09978756
; Patent No. US20020160017A1
; GENERAL INFORMATION:
; APPLICANT: Holder, Anthony
; APPLICANT: Birdsell, Betty
; APPLICANT: Reaney, James
; APPLICANT: Morgan, William
; APPLICANT: Syed, Shabih
; TITLE OF INVENTION: Malaria Vaccine
; FILE REFERENCE: 18396/1005
; CURRENT APPLICATION NUMBER: US/09/978,756
; PRIOR FILING DATE: 2001-10-16
; PRIOR APPLICATION NUMBER: PCT/GB00/01558
; PRIOR FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 09/311,817
; PRIOR FILING DATE: 1999-05-13
; PRIOR APPLICATION NUMBER: 2,271,451
; PRIOR FILING DATE: 1999-05-25
; PRIOR APPLICATION NUMBER: 9909072.2
; PRIOR FILING DATE: 1999-04-20
; NUMBER OF SEQ ID NOS: 3

SOFTWARE: Patentin version 3.0
; SEQ ID NO 3
; LENGTH: 394
; TYPE: PRT
; ORGANISM: Plasmidium falciparum
US-09-978-756-3

Query Match 94.9%; Score 1965; DB 3; Length 394;
Best Local Similarity 100.0%; Pred. No. 1,66-119;
Matches 374; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 18 AISTVMDNIIISGFENEVDYIYKPLAGYRSLLKQIEKNIFFPNINLNDIINSRLKGRKY 77
DB 1 AISTVMDNIIISGFENEVDYIYKPLAGYRSLLKQIEKNIFFPNINLNDIINSRLKGRKY 60
QY 78 FLVDLESDLMOFKHISNSNEYIIEDSFKLNSBQKNTLLSKYKIKESVENDIKFAQEGIS 137
DB 61 FLVDLESDLMOFKHISNSNEYIIEDSFKLNSBQKNTLLSKYKIKESVENDIKFAQEGIS 120
QY 138 YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTSPSPAKTDEOKESKFLPLTNIETL 197
DB 121 YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTSPSPAKTDEOKESKFLPLTNIETL 180
QY 198 YNNLVNKIDVYLINLAKINCNEKDEAHVKITKLSDLKAIIDKIDLFKNPYDPEAIKK 257
DB 181 YNNLVNKIDVYLINLAKINCNEKDEAHVKITKLSDLKAIIDKIDLFKNPYDPEAIKK 240
QY 258 LINDTKKDMGKLLSTGLVONFPNTIISKLEGGFQDMINIISOHCYKQCPENSGCFR 317
DB 241 LINDTKKDMGKLLSTGLVONFPNTIISKLEGGFQDMINIISOHCYKQCPENSGCFR 300
QY 318 HLDREBCKCLLNTKQESDKCVENPNPTCNENNGCGDADATCTEEDSGSRKKITCECTK 377
DB 301 HLDREBCKCLLNTKQESDKCVENPNPTCNENNGCGDADATCTEEDSGSRKKITCECTK 360
QY 378 PDSYPLFDGIFCSS 391
DB 361 PDSYPLFDGIFCSS 374

RESULT 12
US-10-062-809-2
; Sequence 2, Application US/10062809
; Publication No. US20030100106A1
; GENERAL INFORMATION:
; APPLICANT: Chang, Sandra P.
; APPLICANT: Hashimoto, Ann
; APPLICANT: Nishimura, Tani
; TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM FALCIPARUM VACCINE
; FILE REFERENCE: A-67984-1/RFT/TAL/NBC
; CURRENT APPLICATION NUMBER: US/10/062, 809
; CURRENT FILING DATE: 2002-06-28
; PRIOR APPLICATION NUMBER: US 09/500, 376
; PRIOR FILING DATE: 2000-02-08
; PRIOR APPLICATION NUMBER: US 60/266, 281
; PRIOR FILING DATE: 2001-02-01
; NUMBER OF SEQ ID NOS: 79
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 2
; LENGTH: 394
; TYPE: PRT
; ORGANISM: Plasmidium falciparum
US-10-062-809-2

Query Match 93.2%; Score 1931; DB 4; Length 394;
Best Local Similarity 98.7%; Pred. No. 2,66-117;
Matches 369; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 18 AISTVMDNIIISGFENEVDYIYKPLAGYRSLLKQIEKNIFFPNINLNDIINSRLKGRKY 77
DB 1 AISTVMDNIIISGFENEVDYIYKPLAGYRSLLKQIEKNIFFPNINLNDIINSRLKGRKY 60
QY 78 FLVDLESDLMOFKHISNSNEYIIEDSFKLNSBQKNTLLSKYKIKESVENDIKFAQEGIS 137

DB 61 FLVDLESDLMOFKHISNSNEYIIEDSFKLNSBQKNTLLSKYKIKESVENDIKFAQEGIS 120
QY 138 YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTSPSPAKTDEOKESKFLPLTNIETL 197
DB 121 YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTSPSPAKTDEOKESKFLPLTNIETL 180
QY 198 YNNLVNKIDVYLINLAKINCNEKDEAHVKITKLSDLKAIIDKIDLFKNPYDPEAIKK 257
DB 181 YNNLVNKIDVYLINLAKINCNEKDEAHVKITKLSDLKAIIDKIDLFKNPYDPEAIKK 240
QY 258 LINDTKKDMGKLLSTGLVONFPNTIISKLEGGFQDMINIISOHCYKQCPENSGCFR 317
DB 241 LINDTKKDMGKLLSTGLVONFPNTIISKLEGGFQDMINIISOHCYKQCPENSGCFR 300
QY 318 HLDREBCKCLLNTKQESDKCVENPNPTCNENNGCGDADATCTEEDSGSRKKITCECTK 377
DB 301 HLDREBCKCLLNTKQESDKCVENPNPTCNENNGCGDADATCTEEDSGSRKKITCECTK 360
QY 378 PDSYPLFDGIFCSS 391
DB 361 PDSYPLFDGIFCSS 374

RESULT 13
US-10-935-793-2
; Sequence 2, Application US/10935793
; Publication No. US20050037021A1
; GENERAL INFORMATION:
; APPLICANT: Chang, Sandra P.
; APPLICANT: Hashimoto, Ann
; APPLICANT: Nishimura, Tani
; TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM FALCIPARUM VACCINE
; FILE REFERENCE: A-67984-1/RFT/TAL/NBC
; CURRENT APPLICATION NUMBER: US/10/935, 793
; CURRENT FILING DATE: 2004-09-07
; PRIOR APPLICATION NUMBER: US/10/062, 809
; PRIOR FILING DATE: 2002-02-01
; PRIOR APPLICATION NUMBER: US 09/500, 376
; PRIOR FILING DATE: 2000-02-08
; PRIOR APPLICATION NUMBER: US 60/266, 281
; PRIOR FILING DATE: 2001-02-01
; NUMBER OF SEQ ID NOS: 79
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 2
; LENGTH: 394
; TYPE: PRT
; ORGANISM: Plasmidium falciparum
US-10-935-793-2

Query Match 93.2%; Score 1931; DB 5; Length 394;
Best Local Similarity 98.7%; Pred. No. 2,66-117;
Matches 369; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 18 AISTVMDNIIISGFENEVDYIYKPLAGYRSLLKQIEKNIFFPNINLNDIINSRLKGRKY 77
DB 1 AISTVMDNIIISGFENEVDYIYKPLAGYRSLLKQIEKNIFFPNINLNDIINSRLKGRKY 60
QY 78 FLVDLESDLMOFKHISNSNEYIIEDSFKLNSBQKNTLLSKYKIKESVENDIKFAQEGIS 137
DB 61 FLVDLESDLMOFKHISNSNEYIIEDSFKLNSBQKNTLLSKYKIKESVENDIKFAQEGIS 120
QY 138 YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTSPSPAKTDEOKESKFLPLTNIETL 197
DB 121 YYEKVLAKYKDDLESIKKVIKEEKEKFPSSPPTTSPSPAKTDEOKESKFLPLTNIETL 180
QY 198 YNNLVNKIDVYLINLAKINCNEKDEAHVKITKLSDLKAIIDKIDLFKNPYDPEAIKK 257
DB 181 YNNLVNKIDVYLINLAKINCNEKDEAHVKITKLSDLKAIIDKIDLFKNPYDPEAIKK 240
QY 258 LINDTKKDMGKLLSTGLVONFPNTIISKLEGGFQDMINIISOHCYKQCPENSGCFR 317
DB 241 LINDTKKDMGKLLSTGLVONFPNTIISKLEGGFQDMINIISOHCYKQCPENSGCFR 300

QY 318 HDEREBCCLNTYKQBGKCVENPPTCNENNGGCDADATCTEEDSGSSRRKKTCECTK 377
DB 301 HDEREBCCLNTYKQBGKCVENPPTCNENNGGCDADAKCTEEDSGSNGKKTCECTK 360
QY 378 PDSYPLFDGIFCSS 391
DB 361 PDSYPLFDGIFCSS 374

RESULT 14

US-10-925-385-2
; Sequence 2, Application US/10925385
; Publication No. US20050095255A1
; GENERAL INFORMATION:
; APPLICANT: Chang, Sandra P.
; APPLICANT: Kramer, Kenton J.
; APPLICANT: Goshell, William J.
; APPLICANT: Nishimura, Tani
; TITLE OF INVENTION: Baculovirus Produced Plasmodium Falciparum Vaccine
; FILE REFERENCE: A-67984-2
; CURRENT APPLICATION NUMBER: US/10/925,385
; CURRENT FILING DATE: 2004-08-24
; PRIOR APPLICATION NUMBER: US 09/500,376
; PRIOR FILING DATE: 2000-02-08
; PRIOR APPLICATION NUMBER: US 08/195,705
; PRIOR FILING DATE: 1994-02-14
; PRIOR APPLICATION NUMBER: US 07/867,768
; PRIOR FILING DATE: 1992-04-13
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 2
; LENGTH: 394
; TYPE: PRT
; ORGANISM: plasmodium falciparum
US-10-925-385-2

Query Match 93.2%; Score 1911; DB 5; Length 394;
Best Local Similarity 98.7%; Pred. No. 2, 6e-117;
Matches 369; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 18 AISTVMDNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFTFNLLNDLINSRLKKRY 77
DB 1 AISTVMDNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFTFNLLNDLINSRLKKRY 60
QY 78 FLVDLESMDLMOFKHISSENYIIEDSPKLNSEOKNTLLSKYKIKESVENDIKFAQEGIS 137
DB 61 FLVDLESMDLMOFKHISSENYIIEDSPKLNSEOKNTLLSKYKIKESVENDIKFAQEGIS 120
QY 138 YYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKTDEOKKESKFLPLTNIEITL 197
DB 121 YYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKTDEOKKESKFLPLTNIEITL 180
QY 198 YNNLVNKIDVYLINLAKINDCNVEKDEAHVKITKLSDLKALIDDKIDLFPKNYDEFAIKK 257
DB 181 YNNLVNKIDVYLINLAKINDCNVEKDEAHVKITKLSDLKALIDDKIDLFPKNYDEFAIKK 240
QY 258 LINDTKKMDLGLKLTSTGLVQNPNTIISKLEIGKQDMNLINSOHCQCVKQCPENSGCPR 317
DB 241 LINDTKKMDLGLKLTSTGLVQNPNTIISKLEIGKQDMNLINSOHCQCVKQCPENSGCPR 300
QY 318 HDEREBCCLNTYKQBGKCVENPPTCNENNGGCDADATCTEEDSGSSRRKKTCECTK 377
DB 301 HDEREBCCLNTYKQBGKCVENPPTCNENNGGCDADAKCTEEDSGSNGKKTCECTK 360
QY 378 PDSYPLFDGIFCSS 391
DB 361 PDSYPLFDGIFCSS 374

RESULT 15
US-10-062-809-18
; Sequence 18, Application US/10062809

; Publication No. US20030100106A1
; GENERAL INFORMATION:
; APPLICANT: Chang, Sandra P.
; APPLICANT: Hashimoto, Ann
; APPLICANT: Nishimura, Tani
; TITLE OF INVENTION: BACULOVIRUS PRODUCED PLASMODIUM FALCIPARUM VACCINE
; FILE REFERENCE: A-67984-1/RFT/TAI/NBC
; CURRENT APPLICATION NUMBER: US/10/062,809
; CURRENT FILING DATE: 2002-06-28
; PRIOR APPLICATION NUMBER: US 09/500,376
; PRIOR FILING DATE: 2000-02-08
; PRIOR APPLICATION NUMBER: US 60/266,281
; PRIOR FILING DATE: 2001-02-01
; NUMBER OF SEQ ID NOS: 79
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 18
; LENGTH: 396
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: synthetic
US-10-062-809-18

Query Match 93.1%; Score 1928; DB 4; Length 396;
Best Local Similarity 98.1%; Pred. No. 4, 1e-117;
Matches 368; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 16 TMAISVTMDNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFTFNLLNDLINSRLKKR 75
DB 20 TMAISVTMDNLSGFENEYDVIYLLKPLAGVYRSLLKQIEKNIFTFNLLNDLINSRLKKR 79
QY 76 KYFLDLESMDLMOFKHISSENYIIEDSPKLNSEOKNTLLSKYKIKESVENDIKFAQEGIS 135
DB 80 KYFLDLESMDLMOFKHISSENYIIEDSPKLNSEOKNTLLSKYKIKESVENDIKFAQEGIS 139
QY 136 ISYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKTDEOKKESKFLPLTNIEITL 195
DB 140 ISYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKTDEOKKESKFLPLTNIEITL 199
QY 156 TLNNLVNKIDVYLINLAKINDCNVEKDEAHVKITKLSDLKALIDDKIDLFPKNYDEFAIKK 255
DB 200 TLNNLVNKIDVYLINLAKINDCNVEKDEAHVKITKLSDLKALIDDKIDLFPKNYDEFAIKK 259
QY 256 KKLINDTKKMDLGLKLTSTGLVQNPNTIISKLEIGKQDMNLINSOHCQCVKQCPENSGC 315
DB 260 KKLINDTKKMDLGLKLTSTGLVQNPNTIISKLEIGKQDMNLINSOHCQCVKQCPENSGC 319
QY 316 FHHDEREBCCLNTYKQBGKCVENPPTCNENNGGCDADATCTEEDSGSSRRKKTCECTK 375
DB 320 FHHDEREBCCLNTYKQBGKCVENPPTCNENNGGCDADAKCTEEDSGSNGKKTCECTK 379
QY 376 TKPDSYPLFDGIFCSS 390
DB 380 TKPDSYPLFDGIFCSS 394

Search completed: May 5, 2006, 00:29:05
Job time : 169 secs

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Qy	202	UNKIDYVILNKAKINDCNVEDEAHVITKTKSDJKAIDDKTLDPRNPYDFAIKKLIND	261
Db	202	VSKNVTYIDNLKAYINNCOLEKKEKEITVKKLODYNKDEKEEYK-----KSEKK--NE	254
Qy	262	DTKKDMLGKGLSTGLV-ONFPNTIISKLEIGKFOMLNISOHCYKQCPENSGCFRLD	320
Db	255	VKSGLLEKLMKSKLIKENESKEILSQLNTQTLTWSSEHTCIDTNPVNAACYRYLD	314
Qy	321	EREBEKCLLNKQEBDKCVENPFCNENNGCCDADATTEEDSSSRKKTICECTKPPS	380
Db	315	GTEERCLLTTEREBGCKVPASNVTCXDNNGGCAEAECKMTDS---NKIVCKCTKGS	370
Qy	381	YPLFDGIFCS 390	
Db	371	EPLPEGVFCS 380	
RESULT 2			
US-11-144-833-13			
; Sequence 13, Application US/11144833			
; Publication No. US20060018932A1			
; GENERAL INFORMATION:			
; APPLICANT: LONGACRE-ANDRE, SHIRLEY			
; APPLICANT: ROTH, CHARLES			
; APPLICANT: NATO, FARIDABANO			
; APPLICANT: BARNWELL, JOHN			
; APPLICANT: MENDIS, KAMINI			
; TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT			
; TITLE OF INVENTION: OF PLASMODIUM MSP-1			
; FILE REFERENCE: 0660-0139-0XPCT			
; CURRENT APPLICATION NUMBER: US/11/144, 833			
; CURRENT FILING DATE: 2005-06-06			
; PRIOR APPLICATION NUMBER: US/09/125, 031			
; PRIOR FILING DATE: 1999-03-10			
; PRIOR APPLICATION NUMBER: PCT/FR97/00290			
; PRIOR FILING DATE: 1997-02-14			
; PRIOR APPLICATION NUMBER: FR96/01822			
; PRIOR FILING DATE: 1996-02-14			
; NUMBER OF SEQ ID NOS: 15			
; SOFTWARE: PatentIn version 3.1			
; SEQ ID NO 13			
; LENGTH: 380			
; TYPE: PRT			
; ORGANISM: Plasmodium vivax-like sp.			
US-11-144-833-13			
Query Match 37.5%; Score 777; DB 11; Length 380;			
Beet Local Similarity 40.7%; Pred. No. 6, 2e-39;			
Matches 155; Conservative 78; Mismatches 104; Indels 44; Gaps 6			
Qy	32	NEYDVIYKPLAGVRSILKQIEKNIFFPNLNLINDLINSRLKRRKYFLVLESMDLQFXX	91
Db	22	SDYDVYIKPLAGWMTIKKQLEHVNVAENNTITMDLSRLKGRVYFLEVNSDLNPFXX	81
Qy	92	ISSNEYYIIESFKLINSEQKNTLKSYYKIKESVENDIKFAQEGISYYEYKVLAKYDLE	151
Db	82	SSSEYIITKDYKLLDLEKKKLLISYKYGISIDMDLATANDGVTYYNKMELYKTHLD	141
Qy	152	SIKVYIKEREKKEFPESPPTTPPSPAKTDQKKE-----SKPLPF	190
Db	142	GKVKEIKKVEDDI-----KKQDELIKGLGNVNSQSKNEFLAKKALEKYLPE	190
Qy	191	LTNIEFTLNNVLNKIDYILNKLAKINDCNVEDEAHVITKLSDKAIDDKTLDLFFKNPY	250
Db	191	LNSIQKEVESLSKNTYITDNLKAYINNCOLEKKEAEITVKKLOYNKMDLELEYK---	247
Qy	251	DFAIKKLINDTKDMLGKGLSTGLV-ONFPNTIISKLEIGKFOMLNISOHCYKQCP	309
Db	248	--KSEKK--NEVKSGLLEKLMKSKLIKENESKEILSQLNTQTLTWSSEHTCIDTNPV	303
Qy	310	PENSGCFRLDEREBECCCLLNKQEBDKCVENPFCNENNGCCDADATCTEEDSGSSRX	369

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Db      304 PDNAACRYLDGTEEMRDLTFKREBGKCVASANTCKDNNGGAPAEACWIT9S-----N 359
QY      370 KITCECTKDSYPLFDGIFCS 390
      |||:|||||:|||||:
Db      360 KIVCKCTKEGSEPLFEGVFCSS 380

RESULT 3
US-11-144-833-11
; Sequence 11, Application US/11144833
; Publication No. US20060018932A1
; GENERAL INFORMATION:
; APPLICANT: LONGACRE-ANDRE, SHIRLEY
; APPLICANT: ROTH, CHARLES
; APPLICANT: NATO, FARIDABANO
; APPLICANT: BARNWELL, JOHN
; APPLICANT: MEMDIS, KAMINI
; TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
; FILE REFERENCE: 0660-0139-0XPCT
; CURRENT APPLICATION NUMBER: US/11/144,833
; PRIOR FILING DATE: 2005-06-06
; PRIOR APPLICATION NUMBER: US/09/125,031
; PRIOR FILING DATE: 1999-03-10
; PRIOR APPLICATION NUMBER: PCT/FR97/00290
; PRIOR FILING DATE: 1997-02-14
; PRIOR APPLICATION NUMBER: FR96/01822
; PRIOR FILING DATE: 1996-02-14
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 11
; LENGTH: 379
; TYPE: PRT
; ORGANISM: Plasmodium cynomolgi
US-11-144-833-11

Query Match      35.5%; Score 734.5; DB 11; Length 379;
Best Local Similarity 41.9%; Pred. No. 26-36;
Matches 156; Conservative 74; Mismatches 115; Indels 27; Gaps 10.

QY      32 NEYDVIYKPLAGVYRSLSKQIEKNIFTFNLNDILNSRLKKRYFLDVLSEDLMOFKH 91
      |||||:|||||:|||||:|:|:|:|:|||||:|||||:|:|:|:|:
Db      22 NEYVVIVIKPLAGVYKTKIKRPLEHVNALNTNIIDMLDSRLKKKNYFLDVLNSDLNPSYI 81
      |||||:|||||:|||||:|:|:|:|:|||||:|||||:|:|:|:|:

QY      92 ISSNEVIITEDSFKLINSEQKNTLKSYYIKESVENDIKRPOEGISYYEKLAKYKDL 151
      |||||:|||||:|||||:|:|:|:|:|||||:|||||:|:|:|:|:
Db      82 PHSEGYIITKDPYKLLDLEKKK-LIGSYKYIGASVDMWTANDGILAYQKKGDLYKKHLD 140
      |||||:|||||:|||||:|:|:|:|:|||||:|||||:|:|:|:|:

QY      152 SIKKVIIE-----EKKEFPSPPTTPPSPAKTBQKAE-SKFLPFLNIETLYNNL 201
      |||||:|||||:|:|:|:|:|||||:|:|:|:|:|||||:|:|:|:|:
Db      141 EVNACIKSEVEANINKHDEIKKIGSEASKANDKKQNLAKKELOKLYLPFLSSIQKEYSTL 200
      |||||:|||||:|||||:|:|:|:|:|||||:|:|:|:|:|||||:|:|:|:|:

QY      202 VNKIKDYLINLKAKINDCNVEKDEAHVYKITLSDLKAIIDKIDLFKNPYDPEALIKKLIND 261
      |||||:|||||:|||||:|:|:|:|:|||||:|:|:|:|:|||||:|:|:|:|:
Db      201 VNKHASTYDITLKITINNOQIEKKETETIVNLTEDYSKMDDELVDYKQS-----KK--ED 252
      |||||:|||||:|||||:|:|:|:|:|||||:|:|:|:|:|||||:|:|:|:|:

QY      262 DTKKD-MLKGLSLTGLV-QNFPNTTISKLEBGFQDMINT-SQHCCVKKQCPENSGCCPRH 318
      |||||:|||||:|||||:|:|:|:|:|||||:|:|:|:|:|||||:|:|:|:|:
Db      253 DVKSSGGLLEKLMNSKLLINQESKALSELLNVQTO-MLNMSSEHRICIDTNVPENNAACYRY 311
      |||||:|||||:|||||:|:|:|:|:|||||:|:|:|:|:|||||:|:|:|:|:

QY      319 LDEHEECKCLINYOQBDKCVENPNPCNENNGGCDADCTEEDSGSSRKKITCECTKP 378
      |||||:|||||:|||||:|:|:|:|:|||||:|:|:|:|:|||||:|:|:|:|:
Db      312 LDGTEEMRCLLYPFKEDAGKCVAPANNCTCKDKNGGCAPEABCKAND---KNEIVCKTKE 367
      |||||:|||||:|||||:|:|:|:|:|||||:|:|:|:|:|||||:|:|:|:|:

QY      379 DSYPLFDGIFCS 390
      |||||:|||||:
Db      368 GSEPLFEGVFCSS 379
      |||||:|||||:

RESULT 4
US-11-144-833-10
; Sequence 10, Application US/11144833
; Publication No. US20060018932A1

```

GENERAL INFORMATION:
APPLICANT: LONGACRE-ANDRE, SHIRLEY
APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 2005-06-06
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: PCT/FR97/00290
PRIOR FILING DATE: 1997-02-14
PRIOR APPLICATION NUMBER: FR96/01822
NUMBER OF SEQ ID NOS: 15
SOFTWARE: PatentIn version 3.1
SEQ ID NO 10
LENGTH: 108
TYPE: PRT
ORGANISM: Plasmodium falciparum
US-11-144-833-10

Query Match 25.4%; Score 527; DB 11; Length 108;
Best Local Similarity 94.8%; Pred. No. 7.8e-25;
Matches 91; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

Qy 295 DMLNISOHCYKQCPENSGCFRHLDEREBCCLLNKYQESDCKVENPNTCNENNGCGDA 354
Db 13 DEFNISOHCYKQCPENSGCFRHLDEREBCCLLNKYQESDCKVENPNTCNENNGCGDA 72

Qy 355 ADATCTEDSGSSRKKTCTECTKPDSPYPLFDGIFCS 390
Db 73 ADATCTEDSGSSRKKTCTECTKPDSPYPLFDGIFCS 108

RESULT 5
US-11-144-833-5
Sequence 5, Application US/11/144833
Publication No. US20060018932A1
GENERAL INFORMATION:
APPLICANT: LONGACRE-ANDRE, SHIRLEY
APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 2005-06-06
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: PCT/FR97/00290
PRIOR FILING DATE: 1997-02-14
PRIOR APPLICATION NUMBER: FR96/01822
NUMBER OF SEQ ID NOS: 15
SOFTWARE: PatentIn version 3.1
SEQ ID NO 5
LENGTH: 116
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: SYNTHETIC
US-11-144-833-5

Query Match 25.4%; Score 527; DB 11; Length 116;
Best Local Similarity 96.8%; Pred. No. 8.5e-25;
Matches 91; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 298 NISOHCYKQCPENSGCFRHLDEREBCCLLNKYQESDCKVENPNTCNENNGCGDA 357
Db 3 NISOHCYKQCPENSGCFRHLDEREBCCLLNKYQESDCKVENPNTCNENNGCGDA 62
Qy 358 TCTEDSGSSRKKTCTECTKPDSPYPLFDGIFCS 391
Db 63 KCTEDSGSSRKKTCTECTKPDSPYPLFDGIFCS 96

RESULT 6
US-11-144-833-2
Sequence 2, Application US/11/144833
Publication No. US20060018932A1
GENERAL INFORMATION:
APPLICANT: LONGACRE-ANDRE, SHIRLEY
APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 2005-06-06
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: PCT/FR97/00290
PRIOR FILING DATE: 1997-02-14
PRIOR APPLICATION NUMBER: FR96/01822
NUMBER OF SEQ ID NOS: 15
SOFTWARE: PatentIn version 3.1
SEQ ID NO 2
LENGTH: 95
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: SYNTHETIC
US-11-144-833-2

Query Match 25.3%; Score 523; DB 11; Length 95;
Best Local Similarity 96.8%; Pred. No. 1.2e-24;
Matches 90; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 298 NISOHCYKQCPENSGCFRHLDEREBCCLLNKYQESDCKVENPNTCNENNGCGDA 357
Db 3 NISOHCYKQCPENSGCFRHLDEREBCCLLNKYQESDCKVENPNTCNENNGCGDA 62
Qy 358 TCTEDSGSSRKKTCTECTKPDSPYPLFDGIFCS 390
Db 63 KCTEDSGSSRKKTCTECTKPDSPYPLFDGIFCS 95

RESULT 7
US-11-144-833-8
Sequence 8, Application US/11/144833
Publication No. US20060018932A1
GENERAL INFORMATION:
APPLICANT: LONGACRE-ANDRE, SHIRLEY
APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
FILE REFERENCE: 0660-0139-0XPCT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 2005-06-06
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: PCT/FR97/00290
PRIOR FILING DATE: 1997-02-14
PRIOR APPLICATION NUMBER: FR96/01822

PRIOR FILING DATE: 1996-02-14
NUMBER OF SEQ ID NOS: 15
SOFTWARE: PatentIn version 3.1
SEQ ID NO 8
LENGTH: 127
TYPE: PRT
ORGANISM: Plasmodium falciparum
US-11-144-833-8

Query Match 25.3%; Score 523; DB 11; Length 127;
Best Local Similarity 96.8%; Pred. No. 1.6e-24;
Matches 90; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

298 NISQHCYKQCPENSGCFRHLDEREBCCLNLYKQEGDKCVENPNPTCNENNGGCDADA 357
35 NISQHCYKQCPENSGCFRHLDEREBCCLNLYKQEGDKCVENPNPTCNENNGGCDADA 94
358 TCTEEDSGSSRRKKTCTCTKPDSPYPLFDGIFCS 390
95 KCTEEDSGSSNGKKTCTCTKPDSPYPLFDGIFCS 127

RESULT 8

US-11-144-833-14
Sequence 14, Application US/11144833
Publication No. US20060018932A1
GENERAL INFORMATION:
APPLICANT: LONGCRE-ANDRE, SHIRLEY
APPLICANT: ROTH, CHARLES
APPLICANT: NATO, FARIDABANO
APPLICANT: BARNWELL, JOHN
APPLICANT: MENDIS, KAMINI
TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT
TITLE OF INVENTION: OF PLASMODIUM MSP-1
FILE REFERENCE: 0660-0139-0XPECT
CURRENT APPLICATION NUMBER: US/11/144,833
CURRENT FILING DATE: 2005-06-06
PRIOR APPLICATION NUMBER: US/09/125,031
PRIOR FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: PCT/FR97/00290
PRIOR FILING DATE: 1997-02-14
PRIOR APPLICATION NUMBER: FR96/01822
PRIOR FILING DATE: 1996-02-14
NUMBER OF SEQ ID NOS: 15
SOFTWARE: PatentIn version 3.1
SEQ ID NO 14
LENGTH: 281
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: SYNTHETIC
US-11-144-833-14

Query Match 20.5%; Score 424.5; DB 11; Length 281;
Best Local Similarity 35.7%; Pred. No. 2.7e-18;
Matches 131; Conservative 55; Mismatches 66; Indels 115; Gaps 25;

34 YDVITLKLKLAGYVRLSKQIEKNITFTNINLN-DIINSLKRRKYFLDVLESDLMQFQHI 92
20 YDVVY-KPLAGMYKTIK-LENHV--NANTNIDMLDSALKKANTFL-VLNSDLN----- 68
93 SSNEEYIIDSFKLNSQKNTLLKSKYIKESVENDIKFAQEGISYEKYLAKYCDLES 152
69 PSGETIIDPYLLDLLEKKK-LGSYKYGASDDI---ANDG--YTKMGLYKH----- 114
153 IKKVIKEKEKFPSSPPTTPSPAKTDEQKESKFLPFLTNIETL--YNNLVNKIDYLL 209
115 ---LVKVEID-----KKGAKKELKYLPLFSQKEYLVKVTYTDL----- 149
210 INLAKKINDCVKDEAHVKITKLSDLKAIIDKID-LPKNPYDPFAIKKLINDDTKXML 268
150 ---KKINNCOEKKEV-----KLDYKMDLYKS----- 174

269 GKULSTGLVQNPFTIISKLEIGKFOMLNI-----SQHCYKQCPENSGCFRHLDERE 323
175 KVSXSGILEK-----LMSKLIESTKL-SLINVQTOLMSSEHCIDTNPV-NAACRYRLDGE 227
324 ECKCLNLYKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRRKKTCTCTKPDSPYPL 383
228 EWRCLL-FKE--GKCV--PANTC-KDNNGCAPEACECKMDN-----IVCKTKEGSEPL 274
384 FDGIFCS 390
275 FEGVFC 281

RESULT 9

US-11-037-243-65
Sequence 65, Application US/11037243
Publication No. US20050287546A1
GENERAL INFORMATION:
APPLICANT: PLOWMAN, GREGORY
APPLICANT: WHYTE, DAVID
APPLICANT: CAENEPEEL, SEAN
APPLICANT: CHARVOCZAK, GLEN
APPLICANT: MANNING, GERARD
APPLICANT: SUDARSANAM, SUCHA
TITLE OF INVENTION: NOVEL PROTEASES
FILE REFERENCE: 038602/1214
CURRENT FILING DATE: 2005-05-26
PRIOR APPLICATION NUMBER: US/09/888,615
PRIOR FILING DATE: 2001-06-26
PRIOR APPLICATION NUMBER: 60/214,047
PRIOR FILING DATE: 2000-06-26
NUMBER OF SEQ ID NOS: 150
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 65
LENGTH: 980
TYPE: PRT
ORGANISM: Homo sapiens
US-11-037-243-65

Query Match 6.8%; Score 140.5; DB 11; Length 980;
Best Local Similarity 20.9%; Pred. No. 0.7;
Matches 77; Conservative 64; Mismatches 154; Indels 73; Gaps 15;

27 LSGFENEYDVYLLKPLAGVYRSLKKQIEKNITFTNINLN-DIINSLKRRKYFLDVLESDL 86
341 LQFSNLTGNTCYM-----NALIQSLFSLQSPANDLLKQGIPIKKTPLNAL---I 386
87 MQFKHISSENEYIIDSFKLNSQKNTLLKSKYIKESVENDIKFAQEGISY----- 139
387 RRFHLVLVK-----DINSETRKDLLK-----KVKAIAIATAERFSGQMNDANE 432
140 --EKVLAKYKDDLSIKKIVYEEKEKFPSSPPTTPSPAKTDEQKESKFLPFLTNIET 196
433 FLSCLODLKDEMKELNKTWTTEPVSGEENBPDISATRAVY-----CPVITNLEFE 483
197 LNNLVNKIDYLLINLAKKINDCVKDEAHVKITKLSDLKAIIDKIDLFNPNPYDFE-AI 255
484 VQHSITCACEIIPKKEQFPNDLSDLPKRPKLP-----RSIQDSIDLFPRAELELEVSC 539
256 KK-----LINDTTRKMLGKULSTGLVQNPFTIISKLEIGKFOMLNISQHCYKQ 309
540 ECKGKCALVRH--KFNRLPRLVILHLKRYGFVALS--LNNKIGQGVILIPRYTLSSH 595
310 PENS-----GCFRHLDEREBCCLNLYKQEGDKCVENPN-PTCNENNGGCDADATCTEE 362
596 TENKTPPTLQMSAHMAMRPLKA-----SQMVNSCTISPTSPKKTFTKSKSLALCLDS 651
363 DSGSSRKK 370
652 DSEDELK 659

RESULT 10
US-10-793-626-2964
; Sequence 2964, Application US/10793626
; Publication No. US20050255478A1
; GENERAL INFORMATION:
; APPLICANT: KIMBERLY, WILLIAM JOHN
; TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
; FILE REFERENCE: P0348005
; CURRENT APPLICATION NUMBER: US/10/793,626
; PRIOR FILING DATE: 2004-03-04
; PRIOR APPLICATION NUMBER: 60/164,258
; NUMBER OF SEQ ID NOS: 4472
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 2964
; LENGTH: 5024
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; FEATURE:
; OTHER INFORMATION: amino acid sequence
; NAME/KEY: MOD_RES
; LOCATION: (5024)
; OTHER INFORMATION: variable amino acid
US-10-793-626-2964

Query Match 6.4%; Score 133; DB 9; Length 5024;
Best Local Similarity 24.2%; Pred. No. 14;
Matches 68; Conservative 49; Mismatches 126; Indels 38; Gaps 10;
QY 46 YRSKKQIE---KNIFTPNLNDILNSRLKKRYFLDYL--SDLMQFKHSSNRYIE 100
DB 1445 YNNALKAQEDITNNSSNPLNMQDITNA-LNNIKQAQDYLHQAQKLDQDK--TTQAI-- 1470
QY 101 DSFKLHSEQKNTLLSKYKIKESVENDIKFAQEGISYKYLAQKDLSSIKKVIKEE 160
DB 1471 GNLNLNPQKDALIQ-----AINGATSHDQVAEKLK-EAEALDEAMKQL 1514
QY 161 KEKFPSSPTTPPSPAKDEQKESKFLPLFNIEFLYNNLVN-----KIDYILNLKA 214
DB 1515 EDQVNOQDOISNSSPFINEDSDQKTYNDKIQAAKEIINQTSNPTLDKQKIDTLQNTKD 1574
QY 215 KINDCNVEKDEAHVKITKLSDKAIDDKIDLFKNPYDFAIKKLINDDTKDKMLGLST 274
DB 1575 AVNNHSGQKLAQSQDANQNLHDDLTLEEQKNHF-----KPLINNADTRDEVAKQLEI 1629
QY 275 GLVQNFPTTIISKLEIGK--FQDMLNISQHQCVKQCPENS 313
DB 1630 AKQNLGDMSTLHKVINDKDQIQHLSNYINADNDKQYNDNA 1670

RESULT 11
US-10-240-771A-2
; Sequence 2, Application US/10240771A
; Publication No. US20060036074A1
; GENERAL INFORMATION:
; APPLICANT: Merck Patent GmbH
; TITLE OF INVENTION: New protein with polybromo domains
; FILE REFERENCE: hupolybromolcbs
; CURRENT APPLICATION NUMBER: US/10/240,771A
; CURRENT FILING DATE: 2002-10-04
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 2
; LENGTH: 1633
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-240-771A-2

Query Match 6.1%; Score 126.5; DB 9; Length 1633;
Best Local Similarity 20.1%; Pred. No. 8.7;
Matches 66; Conservative 63; Mismatches 104; Indels 95; Gaps 17;

QY 48 SLKKQIEKNIFTPNLNDILNSRLKKRYFLD-VLES-----DLMOFKHSSNE 96
DB 507 SAKRSKKNI-----RKQRMKILFNVLLEAREPSSGRRLDLPFWKP-SKDD 552
QY 97 YTIEDSFKLNSQKNTLLSKYKIKESVENDIKFAQEGI-----SYEKVLAK 145
DB 553 Y--PDYVKIIEPM-----DLKITEHNI RNDKVGAGEGMIIDMKLFNNAHYNEEGSQ 604
QY 146 YKDDLESIKVYKEKKEK--FPSSPTTPPS--PAKDEQKESKFL-PLFNIEFLY 198
DB 605 VTNDAHILEKLEKKEKELGLPDDDMASPKLSRSKSGISPKSKYTWTPMQQKLNVEY 664
QY 199 NNLVANKID-----DYLNILKAKINDCNVEKDEAHVKITKLSDKA 238
DB 665 EAVKNYTDKGRRLSAIFLRLPSELSLDYLTICKPM---DMEKIRSHMANKYQDIDS 721
QY 239 -IDDKIDLFPKNPYDFAIKKLIND-----TKDKMLGKLISTGLVQNFPT--II 285
DB 722 WVEDEVMMFNNACTYNEPESLTKDALVILHKVILETRDRLEDGDS-----HVPVTLII 776
QY 266 SKLIEGKFQDMLNISQHQCVKQCPENS 313
DB 777 QELIHLNF--VSVMSHQDDREGRCYSDS 801

RESULT 12
US-11-087-099-10455
; Sequence 10455, Application US/11087099
; Publication No. US20060041961A1
; GENERAL INFORMATION:
; APPLICANT: Abad, Mark S. et al.
; TITLE OF INVENTION: Genes and Uses for Plant Improvement
; FILE REFERENCE: 38-21(53450)B EP
; CURRENT APPLICATION NUMBER: US/11/087,099
; CURRENT FILING DATE: 2005-03-22
; NUMBER OF SEQ ID NOS: 12464
; SEQ ID NO 10455
; LENGTH: 807
; TYPE: PRT
; ORGANISM: Helicobacter pylori
US-11-087-099-10455

Query Match 6.1%; Score 126; DB 11; Length 807;
Best Local Similarity 22.2%; Pred. No. 4;
Matches 88; Conservative 69; Mismatches 119; Indels 120; Gaps 23;

QY 50 KKQIEKNIFTPNLNDILNSRL--KKRYFLDV--LESDLMOFKH-----SSN 95
DB 147 RKLEQGV-----LDCLNNAKTDERKKCLKDLPKDQSLDILAKESVKAAYDCVSAQKN 200
QY 96 EYIEDSFKLNSQKNTLLSKYKIKESVENDIKFAQEGISYKYLAQKDYDLE---- 151
DB 201 EAEKKECEKLLTPEAK-----KLEEBE-----AKESVKAAYDCVSAQKTEAEKKEC 246
QY 152 -----SIKVIYKEE--KEKFPSSPTTPPSPAKDEQKESKFLPLFNIEFLYNNLVNK 204
DB 247 EKULTPEAKKLEBEAKESVKAAYDCV--SQAKTEAEKKECEK-----LTPEAKKK 296
QY 205 IDYVILNLKAKINDC-----NVEKDEAHVKIT--KLSDLKALIDKIDLFKNPYDFA 254
DB 297 LBEAKSVKAYL-DCVSAQKTEDEKKECEKLLTPEARKLLEQQA-----LDCLNNAKTDEE 351
QY 255 IKKLINDPTKDKMLGKLISTGLVQNFPTTIISKLEIGKFQDMLNISQHQCVKQCPENS 309
DB 352 RKKCLK-DLPKDLQKVKLAKESVK-----AYLDCVSAQKAEKKECEKLLT 397
QY 310 PE-----NSGCF--RHLDRECKCLNLVYKQEGDKVCVENPNTCENNNG 352
DB 398 PEARKLEBEAKESIKAYVDCVSKARNEKEKKECEKLLT--PEARKLE-----BEAKES 449
QY 353 CDADATCTEEDSGSRKKITCECTK--PDSYPLFD 385

Db 450 VKAYLDCVSOAKTEAEKK---ECEKLLTPPEAKKLE 482

RESULT 13

US-11-096-568A-29300

/ Sequence 29300, Application US/11096568A

/ Publication No. US20060048240A1

/ GENERAL INFORMATION:

/ APPLICANT: Alexandrov, Nickolai et al.

/ TITLE OF INVENTION: Sequence-determined DNA Fragments and Corresponding Polypeptides

/ TITLE OF INVENTION: thereby

/ FILE REFERENCE: 2750-1592PUS2

/ CURRENT APPLICATION NUMBER: US/11/096,568A

/ CURRENT FILING DATE: 2005-04-01

/ NUMBER OF SEQ ID NOS: 34471

/ SEQ ID NO 29300

/ LENGTH: 1054

/ TYPE: PRT

/ ORGANISM: Arabidopsis thaliana

/ FEATURE:

/ NAME/KEY: misc feature

/ LOCATION: (1)-(1054)

/ OTHER INFORMATION: Ceres Seq. ID no. 4808407

US-11-096-568A-29300

Query Match 6.1%; Score 126; DB 11; Length 1054;

Best Local Similarity 18.9%; Pred. No. 5.5;

Matches 77; Conservative 80; Mismatches 142; Indels 108; Gaps 19;

Db 50 KKQIEKNITFT---NLNLNDILNSRLKRRKFLDVLSDLMQFKHISNEYIIEDSFL 105

Db 10 KKASDKSLIVIDSAADASHQIDKEAIKKPKY---VQISVQYTHFTG---LEEOIKS 61

Qy 106 LNSEOK--NTLLKSKYKIESVENDIKFAOEGISYEKYLAKYKODLESIKVIEBEKK 163

Db 62 YDVQIKGYDVQVQKTYENOVESYEBQVKEQIDAYDEYHEEYEQVQKLNEDVEULNEK 121

Qy 164 FPPSPPTTTPPAKTDEQCK-----ESKFLPLTNIETLYNNLVNKI--DDYLNTL 212

Db 122 LSVANBEITKALVKQHSKVADAVSGWEKADAEALMLKNTLESYTLISKLAEDRAHL 181

Qy 213 KAKINDC---NVEKD-FAHYKIKTSLDKAI-----DDKIDLFKNPYDEA 254

Db 182 DGALECKRQIINLKKDEHVKLHVALLSKTQIEKMTMEFEKRMCDYEOELRSADSDA 241

Qy 255 IKKLINDPTKKMLGKL-----LSTGLVQ-----NPRVTIISKLEIGKF 293

Db 242 LSRTLQE--RSMVLKVKSEKSRADAEIETLKSNTLMCEKEIKSLKIEYHVVSKLE--- 296

Qy 294 QDMLNISQHCYKQCPENSGCFRLDE-----RECKCLLNYKQEGDKCVENPNPTC 346

Db 297 --IRNEKNMCMCRSASANK---QHLEGVKIKIAKLEAEQGRRLSVRK-----KLPGPA 346

Qy 347 -----NENNGCCADATCTEEDSGSSRK-----KITCECTKPDPSY 381

Db 347 LAQMLKEVENLG-----RDSGDARQKRSYKVSPPCKSPGQY 383

RESULT 14

US-10-793-626-1358

/ Sequence 1358, Application US/10793626

/ Publication No. US20050255478A1

/ GENERAL INFORMATION:

/ APPLICANT: KIMMERLY, WILLIAM JOHN

/ TITLE OF INVENTION: STRAPHLOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS

/ FILE REFERENCE: PUS4800S

/ CURRENT APPLICATION NUMBER: US/10/793,626

/ CURRENT FILING DATE: 2004-03-04

/ PRIOR APPLICATION NUMBER: 60/164,258

/ PRIOR FILING DATE: 1999-11-09

/ NUMBER OF SEQ ID NOS: 4472

/ SOFTWARE: PatentIn Ver. 2.1

/ SEQ ID NO 1358

/ LENGTH: 583

/ TYPE: PRT

/ ORGANISM: Artificial Sequence

/ FEATURE:

/ OTHER INFORMATION: Description of Artificial Sequence: synthetic

/ OTHER INFORMATION: amino acid sequence

US-10-793-626-1358

Query Match 6.1%; Score 125.5; DB 9; Length 583;

Best Local Similarity 22.3%; Pred. No. 2.9;

Matches 52; Conservative 42; Mismatches 84; Indels 55; Gaps 8;

Qy 46 YRSLKQIEKNITFTFNLLNDI--LNSRLKRRKFLDVLSDLMQFKHISNEY--IIED 101

Db 340 YHNEIKGFQKOLEHLSTRENEITOFNQYLEKQVFNOLD-----KIISYQOKPIVEE 393

Qy 102 SFKLNSRQNTLKSYYKIESVENDIKFAOEGISYEKYLAKYKODLESIKVIEBEKK 161

Db 394 EIKRLYSYNDLITKEELTEKMNKNKQFA-----IIEHYTEIYLLKTIIDE-- 442

Qy 162 EKFPSPPTTTPPAKTDEQCKESKFLPLTNIETLY-----NLVKNIDYILINKA 214

Db 443 -----SRQKKDEKLPDKQLDKSSYLSKLEKKEKQLEIESTITNIDA 486

Qy 215 KINCENVEKAHYKITKLSDLKAIIDKIDLFKNP-----YDPEAIKILIN 260

Db 487 TLIDLNDKCD---FVNEIKSAMSIGDTCPCGNEIHSLSGHIHFESIAQRNN 535

RESULT 15

US-11-087-099-5472

/ Sequence 5472, Application US/11087099

/ Publication No. US20060041961A1

/ GENERAL INFORMATION:

/ APPLICANT: Abad, Mark S. et al.

/ TITLE OF INVENTION: Genes and Uses for Plant Improvement

/ FILE REFERENCE: 38-21(53450)B EP

/ CURRENT APPLICATION NUMBER: US/11/087,099

/ CURRENT FILING DATE: 2005-03-22

/ NUMBER OF SEQ ID NOS: 12464

/ SEQ ID NO 5472

/ LENGTH: 1927

/ TYPE: PRT

/ ORGANISM: Helicobacter pylori 26695

/ FEATURE:

/ NAME/KEY: unsure

/ LOCATION: (1)-(1927)

/ OTHER INFORMATION: unsure at all Xaa locations

US-11-087-099-5472

Query Match 6.0%; Score 123.5; DB 11; Length 1927;

Best Local Similarity 21.3%; Pred. No. 16;

Matches 105; Conservative 54; Mismatches 136; Indels 199; Gaps 25;

Qy 50 KKQIEKNITFTFNLLNDILNSRLKRR-----KFLDVLSDLMQFKHISNEYIIED 101

Db 744 KKECEK-----LLTPPEAKKLEAEKKSVAAYLDVSR-----ARNEKEKE 784

Qy 102 SFKLNSRQNTL-----LKSYYKIE-----SVENDIKFAOEGISYEKYLAKYKD 148

Db 785 CEKLLTPPEAKKLEQALDCLKNAKTKDERKKCLDKLPKDLQ-----KYLAK-- 832

Qy 149 DLESIKKYI-----KEEKEFPSSPTTP-----SPAKTDEQCK 183

Db 833 --ESVKALIDCVSOAKTEAEKKECEKLLTPPARKLEBEAKKSVAAYLDVSOAKTEAEK 890

Qy 184 ESKFL-----PLTNIETLYNNLVNKIDYILINKAKIN----- 217

Db 891 ECEKLLTPPEAKKLEBEAKKSVAAYLDVSOAKKEKECEKLLTLESKKLEBEAKSV 950

Qy 218 ----DC-----NNEKQEAHYKIT-----KLSDLKAIIDKIDLFKNPYDFAIKKLINDPT 263

Db 951 KAYLDCVSOAKTEAEKKECEKLLTPPEAKKLEQQA---LDLCKNA-KTEADKRCVAKDL 1005

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CC 1(42) protein was produced as a soluble protein in *Escherichia coli* host

cell cytoplasm by manipulation of IPTG concentration and induction temperature. MSP-1(42) was purified to greater than 95% purity, and showed immunoreactivity with anti-MSP-1 antibodies. It was stable when stored for 18 months at -80 degrees C. The invention relates to the production of large amounts of MSP-1(42) which maintain conformational epitopes critical for development of vaccines. The vaccines are useful against malaria or for eliciting immune responses against *P. falciparum*. The recombinant MSP-1(42) proteins are useful in diagnostic assays, for in vitro monitoring of malaria infection or prognosis the response to treatment of malaria patients, and for production of antibodies used for malaria antigen detection or as therapeutic or prophylactic agents

Sequence 391 AA;

Query Match 100.0%; Score 2071; DB 5; Length 391;

Best Local Similarity 100.0%; Pred. No. 1.7e-140; Mismatches 0; Indels 0; Gaps 0;

Matches 391; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MAHHHHHPPGSGSGTMAISVTMDNLSGFENEYDVILKPLAGYRSLKKQIEKNITTF 60
DB 1 MAHHHHHPPGSGSGTMAISVTMDNLSGFENEYDVILKPLAGYRSLKKQIEKNITTF 60
QY 61 NLNLNDILNSRLKRRKYFLDVLSDLMQFKHISNEYIIEDSFKLNSEQKNTLLKSYKY 120
DB 61 NLNLNDILNSRLKRRKYFLDVLSDLMQFKHISNEYIIEDSFKLNSEQKNTLLKSYKY 120
QY 121 IKESVENDIKFAQEGISYSEKVLAKYKDDLESIKKVIKEEKKEPPSSPTTTPSPAKTDE 180
DB 121 IKESVENDIKFAQEGISYSEKVLAKYKDDLESIKKVIKEEKKEPPSSPTTTPSPAKTDE 180
QY 181 QKESKFLPFLTNIETLYNNLVNKKIDYILNLKAKINDCNVEKDBAHVKITRLSDLKAI 240
DB 181 QKESKFLPFLTNIETLYNNLVNKKIDYILNLKAKINDCNVEKDBAHVKITRLSDLKAI 240
QY 241 DKIDLFKNPYFEAIKKLINDTKKDMGLKLSGLVGNFNTIISKLEGFQDMLNIS 300
DB 241 DKIDLFKNPYFEAIKKLINDTKKDMGLKLSGLVGNFNTIISKLEGFQDMLNIS 300
QY 301 QHQCVKQCPENSGCFRHLDERECKCLLNKYQBGDKCVENPNPTCNENNGCCDADATCT 360
DB 301 QHQCVKQCPENSGCFRHLDERECKCLLNKYQBGDKCVENPNPTCNENNGCCDADATCT 360
QY 361 EEDGSSSRKKITTCCTKPDSPYLPFDGIFCSS 391
DB 361 EEDGSSSRKKITTCCTKPDSPYLPFDGIFCSS 391

RESULT 2

ABP71275 standard; protein; 391 AA.

ABP71275;

28-APR-2003 (first entry)

E. coli expressed *P. falciparum* MSP1_42 (3D7) protein sequence.

MSP-1_42; merozoite protein; protozoasidae; vaccine; malaria; mosquito.

Plasmodium falciparum.

MO2003004525-A2.

16-JAN-2003.

25-JAN-2002; 2002WO-US002428.

29-JAN-2001; 2001US-0264535P.

26-OCT-2001; 2001US-0347564P.

(REED-) REED ARMY INST RES WALTER.

Lyon JA, Angov E;

WPI; 2003-221577/21.

New recombinant Plasmodium falciparum merozoite protein (MSP-142 which retains its native folding, useful for detecting and preventing malaria infection, and for antibody production.

Disclosure; Page 103; 104pp; English.

The invention relates to a recombinant Plasmodium falciparum merozoite protein, (MSP)-1.42 which retains its native folding. The protein is useful as a diagnostic reagent, in antibody production, and as a vaccine against malaria. The antibody may also be used for detecting and treating chronic malaria infection. The present sequence represents a recombinant E. coli expressed *P. falciparum* MAP-1_42 protein

Sequence 391 AA;

Query Match 100.0%; Score 2071; DB 6; Length 391;

Best Local Similarity 100.0%; Pred. No. 1.7e-140; Mismatches 0; Indels 0; Gaps 0;

Matches 391; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MAHHHHHPPGSGSGTMAISVTMDNLSGFENEYDVILKPLAGYRSLKKQIEKNITTF 60
DB 1 MAHHHHHPPGSGSGTMAISVTMDNLSGFENEYDVILKPLAGYRSLKKQIEKNITTF 60
QY 61 NLNLNDILNSRLKRRKYFLDVLSDLMQFKHISNEYIIEDSFKLNSEQKNTLLKSYKY 120
DB 61 NLNLNDILNSRLKRRKYFLDVLSDLMQFKHISNEYIIEDSFKLNSEQKNTLLKSYKY 120
QY 121 IKESVENDIKFAQEGISYSEKVLAKYKDDLESIKKVIKEEKKEPPSSPTTTPSPAKTDE 180
DB 121 IKESVENDIKFAQEGISYSEKVLAKYKDDLESIKKVIKEEKKEPPSSPTTTPSPAKTDE 180
QY 181 QKESKFLPFLTNIETLYNNLVNKKIDYILNLKAKINDCNVEKDBAHVKITRLSDLKAI 240
DB 181 QKESKFLPFLTNIETLYNNLVNKKIDYILNLKAKINDCNVEKDBAHVKITRLSDLKAI 240
QY 241 DKIDLFKNPYFEAIKKLINDTKKDMGLKLSGLVGNFNTIISKLEGFQDMLNIS 300
DB 241 DKIDLFKNPYFEAIKKLINDTKKDMGLKLSGLVGNFNTIISKLEGFQDMLNIS 300
QY 301 QHQCVKQCPENSGCFRHLDERECKCLLNKYQBGDKCVENPNPTCNENNGCCDADATCT 360
DB 301 QHQCVKQCPENSGCFRHLDERECKCLLNKYQBGDKCVENPNPTCNENNGCCDADATCT 360
QY 361 EEDGSSSRKKITTCCTKPDSPYLPFDGIFCSS 391
DB 361 EEDGSSSRKKITTCCTKPDSPYLPFDGIFCSS 391

RESULT 3

ADM86524 standard; protein; 391 AA.

ADM86524;

03-JUN-2004 (first entry)

E. coli expressed Plasmodium falciparum MSP142 (3D7) protein.

Malaria; vaccine; merozoite surface protein-142; MSP-142;

immune response; diagnosis.

Plasmodium falciparum.

US2003161839-A1.

28-AUG-2003.

25-JAN-2002; 2002US-00057532.

29-JAN-2001; 2001US-0264535P.

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PR 26-OCT-2001; 2001US-0347563P.
XX (LYON/) LYON J A.
PA (ANGOV) ANGOV E.
PA (COHEN) COHEN J D.
PA (VOSS/) VOSS G.
XX Lyon JA, Angov E, Cohen JD, Voss G;
XX WPI, 2003-843522/78.
DR N-PSDB; ADM86523.
XX Malaria vaccine comprises Plasmodium falciparum merozoite surface protein
PT -142.
XX Disclosure: SEQ ID NO 7; 41pp; English.
XX The invention relates to a malaria vaccine which comprises Plasmodium
CC falciparum merozoite surface protein-142 (MSP-142), and an adjuvant
CC consisting of A, B, C, D, and E. The invention also relates to a method
CC for inducing protective immune response to malaria. The invention is used
CC as diagnostic reagent for antibody production or as vaccine against
CC malaria infection. The present sequence is E. coli expressed P.
CC falciparum MSP142 (3D7) protein. This sequence is used to illustrate the
CC method of the invention.
XX Sequence 391 AA;
SQ
Query Match 100.0%; Score 2071; DB 7; Length 391;
Best Local Similarity 100.0%; Pred. No. 1.7e-140;
Matches 391; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MAHHHHHPGSGSGTMAISVTMDNLSGFENEYDVIYKPLAGVRSLLKKQIEKNITF 60
DB 1 MAHHHHHPGSGSGTMAISVTMDNLSGFENEYDVIYKPLAGVRSLLKKQIEKNITF 60
QY 61 NLNLNDIILNSRLKKRRYFLDVLESDDLMOFKHISNNEYIIEDSFKLNSBOXTLLKSYKY 120
DB 61 NLNLNDIILNSRLKKRRYFLDVLESDDLMOFKHISNNEYIIEDSFKLNSBOXTLLKSYKY 120
QY 121 IKESVENDIKFAQEGISYIEKVLAKYKDDLSIKKVIKEKEKFPSSPTTPSPAKTDE 180
DB 121 IKESVENDIKFAQEGISYIEKVLAKYKDDLSIKKVIKEKEKFPSSPTTPSPAKTDE 180
QY 181 OKKESKFLPFLTNIEFLYNNLVNKKIDYILNKAKINDCNVEKDEAHVKTITKLSDLKAD 240
DB 181 OKKESKFLPFLTNIEFLYNNLVNKKIDYILNKAKINDCNVEKDEAHVKTITKLSDLKAD 240
QY 241 DKIDLFKNPYDPEAIKKLINDTKKMLGKLTSTGLVQNPNTIISKLEGFQDMLNIS 300
DB 241 DKIDLFKNPYDPEAIKKLINDTKKMLGKLTSTGLVQNPNTIISKLEGFQDMLNIS 300
QY 301 OHQCVKQCPENSGCFRHLDEREBCCLLNYKQEGDKCVENPPTCNENNGCCDADATCT 360
DB 301 OHQCVKQCPENSGCFRHLDEREBCCLLNYKQEGDKCVENPPTCNENNGCCDADATCT 360
QY 361 EEDSGSSRKKITCECTKPPSYPLFDGIFCSS 391
DB 361 EEDSGSSRKKITCECTKPPSYPLFDGIFCSS 391
RESULT 4
ABB79625
ID ABB79625 standard; protein; 393 AA.
XX ABB79625;
XX 21-OCT-2002 (first entry)
XX E. coli expressed P. falciparum MSP-1 recombinant protein.
XX Merozoite surface protein-1; MSP-1; malaria; vaccine; protozoacide.
XX
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OS Plasmodium falciparum.
OS Synthetic.
OS Chimeric.
XX WO200258727-A2.
XX 01-AUG-2002.
XX 25-JAN-2002; 2002MO-US002554.
XX 26-JAN-2001; 2001US-0264535P.
PR (REED-) REED ARMY INST RES WALTER.
XX Lyon JA, Angov E, Cohen JD, Voss G;
XX WPI, 2002-590798/63.
XX New vaccine comprising Plasmodium falciparum MSP-142 protein and an
PT adjuvant, useful against malaria or for eliciting immune responses
PT against P. falciparum.
XX Disclosure: Page 92-93; 99pp; English.
XX The present sequence is that of a recombinant protein comprising
CC Plasmodium falciparum 3D7 merozoite surface protein-1 42 kDa fragment
CC (MSP-1(42)) with an N-terminal (His)6-tag for affinity purification and 3
CC linker amino acids. The levels of expression of the recombinant protein,
CC encoded by plasmid pET-TEGR-42(AT), were 2-5% of total E. coli protein,
CC and the protein was correctly folded based on immunoreactivity with a
CC series of MSP-1(19) specific monoclonal antibodies. The present invention
CC relates to the production of large amounts of MSP-1(42) which maintain
CC conformational epitopes critical for development of vaccines. The
CC vaccines are useful against malaria or for eliciting immune responses
CC against P. falciparum. The recombinant MSP-1(42) proteins are useful in
CC diagnostic assays, for in vitro monitoring of malaria infection or
CC production of antibodies used for treatment of malaria patients, and for
CC therapeutic or prophylactic agents
XX Sequence 393 AA;
SQ
Query Match 99.2%; Score 2055; DB 5; Length 393;
Best Local Similarity 99.2%; Pred. No. 2.4e-139;
Matches 390; Conservative 0; Mismatches 1; Indels 2; Gaps 1;
QY 1 MAHHHHHPGSG--GSGTMAISVTMDNLSGFENEYDVIYKPLAGVRSLLKKQIEKNITF 58
DB 1 MAHHHHHPGSGIEBGRGTMAISVTMDNLSGFENEYDVIYKPLAGVRSLLKKQIEKNITF 60
QY 59 TFNLNLNDIILNSRLKKRRYFLDVLESDDLMOFKHISNNEYIIEDSFKLNSBOXTLLKSY 118
DB 59 TFNLNLNDIILNSRLKKRRYFLDVLESDDLMOFKHISNNEYIIEDSFKLNSBOXTLLKSY 120
QY 119 KYIKESVENDIKFAQEGISYIEKVLAKYKDDLSIKKVIKEKEKFPSSPTTPSPAKT 178
DB 119 KYIKESVENDIKFAQEGISYIEKVLAKYKDDLSIKKVIKEKEKFPSSPTTPSPAKT 180
QY 181 DEOKKESKFLPFLTNIEFLYNNLVNKKIDYILNKAKINDCNVEKDEAHVKTITKLSDLKA 238
DB 181 DEOKKESKFLPFLTNIEFLYNNLVNKKIDYILNKAKINDCNVEKDEAHVKTITKLSDLKA 240
QY 239 IDDKIDLFKNPYDPEAIKKLINDTKKMLGKLTSTGLVQNPNTIISKLEGFQDMLN 298
DB 241 IDDKIDLFKNPYDPEAIKKLINDTKKMLGKLTSTGLVQNPNTIISKLEGFQDMLN 300
QY 299 ISOHQCVKQCPENSGCFRHLDEREBCCLLNYKQEGDKCVENPPTCNENNGCCDADAT 358
DB 301 ISOHQCVKQCPENSGCFRHLDEREBCCLLNYKQEGDKCVENPPTCNENNGCCDADAT 360
QY 359 CTEEDSGSSRKKITCECTKPPSYPLFDGIFCSS 391
DB 361 CTEEDSGSSRKKITCECTKPPSYPLFDGIFCSS 393
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RESULT 5
ID ABP71273
ABP71273 standard; protein; 393 AA.
XX
AC ABP71273;
XX
DT 28-APR-2003 (first entry)
XX
DE P. falciparum MSP1_42 (3D7) protein sequence in clone pET42A.
XX
KW MSP-1_42; merozoite protein; protozoacide; vaccine; malaria; mosquito.
XX
OS Plasmodium falciparum.
XX
PN WO2003004525-A2.
XX
PD 16-JAN-2003.
XX
PF 25-JAN-2002; 2002WO-US002428.
XX
PR 29-JAN-2001; 2001US-0264535P.
PR 26-OCT-2001; 2001US-0347564P.
XX
PA (REED-) REED ARMY INST RES WALTER.
XX
PI Lyon JA, Angov E;
XX
DR WPI; 2003-221577/21.
XX
PT New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which
PT retains its native folding, useful for detecting and preventing malaria
PT infection, and for antibody production.
XX
PS Disclosure; Page 96-97; 104pp; English.
XX
CC The invention relates to a recombinant Plasmodium falciparum merozoite
CC protein, (MSP)-142 which retains its native folding. The protein is
CC useful as a diagnostic reagent, in antibody production, and as a vaccine
CC against malaria. The antibody may also be used for detecting and treating
CC chronic malaria infection. The present sequence represents a recombinant
CC E. coli expressed P. falciparum MAP-1_42 protein expressed in clone
CC pET42A
XX
SQ Sequence 393 AA;
XX
Query Match 99.2%; Score 2055; DB 6; Length 393;
Best Local Similarity 99.2%; Pred. No. 2,4e-139;
Matches 390; Conservative 0; Mismatches 1; Indels 2; Gaps 1;
OY 1 MAHHHHHPGGS--GSGTMAISVTMDNIIISGFENEYDVIYIKPLAGVYRSIKKOIEKNIF 58
DB 1 MAHHHHHPGGSIEGRGTMAISVTMDNIIISGFENEYDVIYIKPLAGVYRSIKKOIEKNIF 60
OY 59 TFNLNDIILNSRLKRRKRYFLDVLES DLMQFKHISSENYIIEDSFKLNSRQKNTLLKSY 118
DB 61 TFNLNDIILNSRLKRRKRYFLDVLES DLMQFKHISSENYIIEDSFKLNSRQKNTLLKSY 120
OY 119 KYIKESVENDIKFAQEGISYIEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKT 178
DB 121 KYIKESVENDIKFAQEGISYIEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKT 180
OY 179 DEQKKESKFLPFLTNIETLTNNLVNKIDYILNKAKINDCNVEKDEAHVKITKLSDLKA 238
DB 181 DEQKKESKFLPFLTNIETLTNNLVNKIDYILNKAKINDCNVEKDEAHVKITKLSDLKA 240
OY 239 IDDKIDLFKNBYDFEAIKKLINDTKDMLGKLTSGLVONFPNTIISKLEGEQDMLN 298
DB 241 IDDKIDLFKNBYDFEAIKKLINDTKDMLGKLTSGLVONFPNTIISKLEGEQDMLN 300
OY 299 ISQHQCVCQCPENSGCFRHLDERECCCLNLYKQEGDKCVENPNPTCNENNGCGDADAT 358

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DB 301 ISQHQCVCQCPENSGCFRHLDERECCCLNLYKQEGDKCVENPNPTCNENNGCGDADAT 360
OY 359 CTEEDSGSSRRKKTCECTKPDSPYLPFDGIFCSS 391
DB 361 CTEEDSGSSRRKKTCECTKPDSPYLPFDGIFCSS 393
RESULT 6
ID ADM86520
ADM86520 standard; protein; 393 AA.
XX
AC ADM86520;
XX
DT 03-JUN-2004 (first entry)
XX
DE pET42A Plasmodium falciparum MSP142 (3D7) protein.
XX
KW Malaria; vaccine; merozoite surface protein-142; MSP-142;
XX immune response; diagnosis.
XX
OS Plasmodium falciparum.
XX
PN US2003161839-A1.
XX
PD 28-AUG-2003.
XX
PF 25-JAN-2002; 2002US-00057532.
XX
PR 29-JAN-2001; 2001US-0264535P.
PR 26-OCT-2001; 2001US-0347563P.
XX
PA (LYON/) LYON J A.
PA (ANGOV/) ANGOV E.
PA (COHEN/) COHEN J D.
PA (VOSS/) VOSS G.
XX
PI Lyon JA, Angov E, Cohen JD, Voss G;
XX
DR WPI; 2003-843522/78.
XX
PT Malaria vaccine comprises Plasmodium falciparum merozoite surface protein
PT -142.
XX
PS Disclosure; SEQ ID NO 3; 41pp; English.
XX
CC The invention relates to a malaria vaccine which comprises Plasmodium
CC falciparum merozoite surface protein-142 (MSP-142) and an adjuvant
CC consisting of A, B, C, D, and E. The invention also relates to a method
CC for inducing protective immune response to malaria. The invention is used
CC as diagnostic reagent for antibody production or as vaccine against
CC malaria infection. The present sequence is Escherichia coli expressed P.
CC falciparum MSP142 (3D7) protein sequence in pET42A. This sequence is used
CC to illustrate the method of the invention.
XX
SQ Sequence 393 AA;
XX
Query Match 99.2%; Score 2055; DB 7; Length 393;
Best Local Similarity 99.2%; Pred. No. 2,4e-139;
Matches 390; Conservative 0; Mismatches 1; Indels 2; Gaps 1;
OY 1 MAHHHHHPGGS--GSGTMAISVTMDNIIISGFENEYDVIYIKPLAGVYRSIKKOIEKNIF 58
DB 1 MAHHHHHPGGSIEGRGTMAISVTMDNIIISGFENEYDVIYIKPLAGVYRSIKKOIEKNIF 60
OY 59 TFNLNDIILNSRLKRRKRYFLDVLES DLMQFKHISSENYIIEDSFKLNSRQKNTLLKSY 118
DB 61 TFNLNDIILNSRLKRRKRYFLDVLES DLMQFKHISSENYIIEDSFKLNSRQKNTLLKSY 120
OY 119 KYIKESVENDIKFAQEGISYIEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKT 178
DB 121 KYIKESVENDIKFAQEGISYIEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKT 180
OY 179 DEQKKESKFLPFLTNIETLTNNLVNKIDYILNKAKINDCNVEKDEAHVKITKLSDLKA 238

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Db DEQKESKFLPFLTNIETLYNNLVNKKIDYLIINLAKKINDCNVEKDEAHVKITKLSDLKA 240
Qy 239 IDDKIDLEFKNPYDFEAIKKLINDDTKDKMLGKLSLTVQNPNTIISKLIEGKQDMLN 298
Db 241 IDDKIDLEFKNPYDFEAIKKLINDDTKDKMLGKLSLTVQNPNTIISKLIEGKQDMLN 300
Qy 299 ISQHCVKQCCPENSGCFRHLDERECKCLANYKQEGDKCVENPNTCENNNGCCDADAT 358
Db 301 ISQHCVKQCCPENSGCFRHLDERECKCLANYKQEGDKCVENPNTCENNNGCCDADAT 360
Qy 359 CTBEDSGSSRRKKTICECTKPDSPYPLFDGIFCSS 391
Db 361 CTBEDSGSSRRKKTICECTKPDSPYPLFDGIFCSS 393
RESULT 7
ID ABB79624 standard; protein; 431 AA.
AC ABB79624;
DT 21-OCT-2002 (first entry)
DE E. coli expressed P. falciparum MSP-1 recombinant protein.
KW Merozoite surface protein-1; MSP-1; malaria; vaccine; protozoacide.
OS Plasmodium falciparum.
OS Synthetic.
OS Chimeric.
PN WO200258727-A2.
PD 01-AUG-2002.
PF 25-JAN-2002; 2002WO-US002554.
PR 26-JAN-2001; 2001US-0264535P.
PX (REED-) REED ARMY INST RES WALTER.
PY Lyon JA, Angov E, Cohen JD, Voss G;
PT WPI; 2002-590798/63.
PS Disclosure: Page 90-91; 99pp; English.
CC The present sequence is that of a recombinant protein comprising
CC Plasmodium falciparum 3D7 merozoite surface protein-1 42 kDa fragment
CC (MSP-1(42)) with an N-terminal (His)6-tag for affinity purification and
CC an additional vector-encoded sequence (approximately 50 amino acids)
CC which include an enterokinase cleavage site, a S-peptide tag and a
CC thrombin cleavage site fused to the N-terminus of MSP-1(42). The levels
CC of expression of this fusion protein, encoded by plasmid pET(50)MSP-142,
CC were 5-10% of total E. coli protein in crude cell lysates, and the
CC protein was purified to near homogeneity with 2 consecutive passes over a
CC Ni2+-NTA agarose resin. The present invention relates to the production
CC of large amounts of MSP-1(42) which maintain conformational epitopes
CC critical for development as vaccines. The vaccines are useful against
CC malaria or for eliciting immune responses against P. falciparum. The
CC recombinant MSP-1(42) proteins are useful in diagnostic assays, for in
CC vitro monitoring of malaria infection or prognosing the response to
CC treatment of malaria patients, and for production of antibodies used for
CC malaria antigen detection or as therapeutic or prophylactic agents
XX Sequence 431 AA;

Best Local Similarity 89.5%; Pred. No. 6e-136;
Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;
Qy 3 HHHHHHPGG-----SSGGMAISV 21
Db 2 HHHHHSSGLVRSGMKETAANAFERQHMDSPDIGTDDKAMADISIEGRMAISV 61
Qy 22 TMDNIIISGFENEVDVITYLKPLAGVYRSLSKKOIEKNIPTFNINLNDILNSRLKKRYFLDV 81
Db 62 TMDNIIISGFENEVDVITYLKPLAGVYRSLSKKOIEKNIPTFNINLNDILNSRLKKRYFLDV 121
Qy 82 LESDLMQFKHIISSNEYIIEDSPKLIINSQKNTLLKSYIYIESVENDIKFAQEGISYIEK 141
Db 122 LESDLMQFKHIISSNEYIIEDSPKLIINSQKNTLLKSYIYIESVENDIKFAQEGISYIEK 181
Qy 142 VLAKYKDDLESIIKKYIKKKKKFPSSPPTTPSPAKTDEQKKSEKFLPFLTNIETLYNNL 201
Db 182 VLAKYKDDLESIIKKYIKKKKKFPSSPPTTPSPAKTDEQKKSEKFLPFLTNIETLYNNL 241
Qy 202 VNKKIDYLIINLAKKINDCNVEKDEAHVKITKLSDLKAIDDKIDLEFKNPYDFEAIKKLIND 261
Db 242 VNKKIDYLIINLAKKINDCNVEKDEAHVKITKLSDLKAIDDKIDLEFKNPYDFEAIKKLIND 301
Qy 262 DTKDKMLGKLSLTVQNPNTIISKLIEGKQDMLNISQHCVKQCCPENSGCFRHUDE 321
Db 302 DTKDKMLGKLSLTVQNPNTIISKLIEGKQDMLNISQHCVKQCCPENSGCFRHUDE 361
Qy 322 REECKCLANYKQEGDKCVENPNTCENNNGCCDADATCTBEDSGSSRRKKTICECTKPDSPY 381
Db 362 REECKCLANYKQEGDKCVENPNTCENNNGCCDADATCTBEDSGSSRRKKTICECTKPDSPY 421
Qy 382 PLFDGIFCSS 391
Db 422 PLFDGIFCSS 431
RESULT 8
ID ABB71272 standard; protein; 431 AA.
AC ABB71272;
DT 28-APR-2003 (first entry)
DE P. falciparum MSP1_42 (3D7) protein sequence in clone pET(50)MSP1-42.
KW MSP-1_42; merozoite protein; protozoacide; vaccine; malaria; mosquito.
OS Plasmodium falciparum.
PN WO2003004525-A2.
PD 16-JAN-2003.
PF 25-JAN-2002; 2002WO-US002428.
PR 29-JAN-2001; 2001US-0264535P.
PX 26-OCT-2001; 2001US-0347364P.
PY (REED-) REED ARMY INST RES WALTER.
PT Lyon JA, Angov E;
PS WPI; 2003-221577/21.
CC New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which
CC retains its native folding, useful for detecting and preventing malaria
CC infection, and for antibody production.
XX Claim 5; Page 95-96; 104pp; English.
XX The invention relates to a recombinant Plasmodium falciparum merozoite
CC protein, (MSP)-1_42 which retains its native folding. The protein is

CC useful as a diagnostic reagent, in antibody production, and as a vaccine
 CC against malaria. The antibody may also be used for detecting and treating
 CC chronic malaria infection. The present sequence represents a recombinant
 CC E. coli expressed P. falciparum MAP-1_42 protein expressed in clone
 CC pET(50)MSP1-42
 XX

Sequence 431 AA;

Query Match 97.0%; Score 2008.5; DB 6; Length 431;
 Best Local Similarity 89.5%; Pred. No. 66-136;
 Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;

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QY 3 HHHHHHPGG-----SSGGMATISV 21
DB 2 HHHHHSSGLVPRGSGMKETAARFERQHMDSPDLGTDHDDKAMADIGSIEGRGTMAISV 61
QY 22 TMDNITLSGFENEYDIYIKPLAGVYRSLSKKQIEKNIFPNLNLNDILNSRLKKRYFLDV 81
DB 62 TMDNITLSGFENEYDIYIKPLAGVYRSLSKKQIEKNIFPNLNLNDILNSRLKKRYFLDV 121
QY 82 LESDLMOPKHISNNEYIIEDSFKLNSBOKNTLSKYKIKESVENDIKFAOEGISYEEK 141
DB 122 LESDLMOPKHISNNEYIIEDSFKLNSBOKNTLSKYKIKESVENDIKFAOEGISYEEK 181
QY 142 VLAKYKODLESIKKVIKEKEKFPSSPTTPPSPAKTDEQKESKFLPFLTNIEFLYNL 201
DB 182 VLAKYKODLESIKKVIKEKEKFPSSPTTPPSPAKTDEQKESKFLPFLTNIEFLYNL 241
QY 202 VNKTIDVYILNLKAKINDCNVEKDEAHVKITKLSLKAIDDKIDLPKNYDFEAIKKLIND 261
DB 242 VNKTIDVYILNLKAKINDCNVEKDEAHVKITKLSLKAIDDKIDLPKNYDFEAIKKLIND 301
QY 262 DTKKDLMLSTGLVQNFPTTIISKLIEGKFQDMLNISQHCYKQCPENSGCFRHLDE 321
DB 302 DTKKDLMLSTGLVQNFPTTIISKLIEGKFQDMLNISQHCYKQCPENSGCFRHLDE 361
QY 322 REECKCLLNKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPSY 381
DB 362 REECKCLLNKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPSY 421
QY 382 PLFDGIFCSS 391
DB 422 PLFDGIFCSS 431

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RESULT 9

ADM86519 ID ADM86519 standard; protein, 431 AA.

ADM86519;

03-JUN-2004 (first entry)

pET(50)MSP1-42 P. falciparum MSP142 (3D7) protein.

Malaria; vaccine; merozoite surface protein-142; MSP-142;

immune response; diagnosis.

Plasmodium falciparum.

US2003161839-A1.

28-AUG-2003.

25-JAN-2002; 2002US-00057532.

29-JAN-2001; 2001US-0264535P.

26-OCT-2001; 2001US-0347563P.

(LYON/J. LYON J A.

(ANGOV E. ANGOV E.

(COHEN J D. COHEN J D.

(VOSS G. VOSS G.

XX Lyon JA, Angov E, Cohen JD, Voss G;
 XX WPI; 2003-843522/78.
 DR
 XX
 PT Malaria vaccine comprises Plasmodium falciparum merozoite surface protein
 PT -142.
 PS
 XX
 XX

Disclosure; SEQ ID NO 2; 41pp; English.

CC The invention relates to a malaria vaccine which comprises Plasmodium
 CC falciparum merozoite surface protein-142 (MSP-142), and an adjuvant
 CC consisting of A, B, C, D, and E. The invention also relates to a method
 CC for inducing protective immune response to malaria. The invention is used
 CC as diagnostic reagent for antibody production or as vaccine against
 CC malaria infection. The present sequence is Escherichia coli expressed P.
 CC falciparum MSP142 (3D7) protein sequence in pET(50)MSP1-42. This sequence
 CC is used to illustrate the method of the invention.
 XX

Sequence 431 AA;

Query Match 97.0%; Score 2008.5; DB 7; Length 431;
 Best Local Similarity 89.5%; Pred. No. 66-136;
 Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;

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QY 3 HHHHHHPGG-----SSGGMATISV 21
DB 2 HHHHHSSGLVPRGSGMKETAARFERQHMDSPDLGTDHDDKAMADIGSIEGRGTMAISV 61
QY 22 TMDNITLSGFENEYDIYIKPLAGVYRSLSKKQIEKNIFPNLNLNDILNSRLKKRYFLDV 81
DB 62 TMDNITLSGFENEYDIYIKPLAGVYRSLSKKQIEKNIFPNLNLNDILNSRLKKRYFLDV 121
QY 82 LESDLMOPKHISNNEYIIEDSFKLNSBOKNTLSKYKIKESVENDIKFAOEGISYEEK 141
DB 122 LESDLMOPKHISNNEYIIEDSFKLNSBOKNTLSKYKIKESVENDIKFAOEGISYEEK 181
QY 142 VLAKYKODLESIKKVIKEKEKFPSSPTTPPSPAKTDEQKESKFLPFLTNIEFLYNL 201
DB 182 VLAKYKODLESIKKVIKEKEKFPSSPTTPPSPAKTDEQKESKFLPFLTNIEFLYNL 241
QY 202 VNKTIDVYILNLKAKINDCNVEKDEAHVKITKLSLKAIDDKIDLPKNYDFEAIKKLIND 261
DB 242 VNKTIDVYILNLKAKINDCNVEKDEAHVKITKLSLKAIDDKIDLPKNYDFEAIKKLIND 301
QY 262 DTKKDLMLSTGLVQNFPTTIISKLIEGKFQDMLNISQHCYKQCPENSGCFRHLDE 321
DB 302 DTKKDLMLSTGLVQNFPTTIISKLIEGKFQDMLNISQHCYKQCPENSGCFRHLDE 361
QY 322 REECKCLLNKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPSY 381
DB 362 REECKCLLNKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRKKITCECTKPSY 421
QY 382 PLFDGIFCSS 391
DB 422 PLFDGIFCSS 431

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RESULT 10

ABB79623 ID ABB79623 standard; protein, 546 AA.

ABB79623;

29-AUG-2003 (revised)

21-OCT-2002 (first entry)

E. coli expressed P. falciparum MSP-1 recombinant protein.

Merozoite surface protein-1; MSP-1; chloroquine; malaria; vaccine;

protozoicide.

Plasmodium falciparum.

OS	Escherichia coli.
XX	Chimeric.
XX	
FT	Key
FT	Misc-difference
FT	Location/Qualifiers 36
XX	/note= "given as Ccy in specification"
PN	WO200258727-A2.
PD	01-AUG-2002.
PF	25 -JAN-2002; 2002WO-US002554.
PR	26-JAN-2001; 2001US-0264535P.
PA	(REED-) REED ARMY INST RES WALTER.
PI	Lyon JA, Angov E, Cohen JD, Vose G;
XX	
XX	WPI: 2002-590798/63.
PT	New vaccine comprising Plasmodium falciparum MSP-142 protein and an adjuvant, useful against malaria or for eliciting immune responses against P. falciparum.
PS	Disclosure; Page 88-90; 9pp; English.
CC	The present sequence is that of a recombinant protein comprising Escherichia coli thiodoxin at the N-terminus of Plasmodium falciparum 3D7 merozoite surface protein-1 42 kDa fragment (MSP-1(42)). The protein was expressed in E. coli using vector pET-Tex42. This expression system provides sufficient levels of recombinant protein for development as a diagnostic and vaccine antigen, providing proper covalent disulfide bridging can be achieved. The present invention relates to the production of large amounts of MSP-1(42) which maintain conformational epitopes critical to epitope formation in pure form. The vaccines are useful against malaria or for eliciting immune responses against P. falciparum. The recombinant MSP-1(42) proteins are useful in diagnostic assays, for in vitro monitoring of malaria infection or prognosis of the response to treatment of malaria patients, and for production of antibodies used for malaria antigen detection or as therapeutic or prophylactic agents. (Updated on 29-AUG-2003 to standardise OS field)
Sequence 546 AA;	
Query Match	97.0%; Score 2008.5; DB 5; Length 546;
Best Local Similarity	89.5%; Pred. No. 8.3e-136;
Matches 385; Conservative	0; Mismatches 4; Indels 41; Gaps 1
OY	HHHHHPCG-----SSSGTMAISV 21
DB	117 HHHHHSSGLVRRSGSKMETAAKKEKRMDSPLDGTDDDDPKAMDISIGIEGRGTMAISV 176
OY	TMDNIISGFENEVDYIYLKPLAGVYSRLKKQIEKNIFTFNLMLNDILNSRLKKRYFLDV 81
DB	177 TMDNISGFENEVDYIYLKPLAGVYSRLKKQIEKNIFTFNLMLNDILNSRLKKRYFLDV 236
OY	82 LESLDMQRKHISSNEVIIEDSFKLINSEKNTLLSYKTIKESVENDIDFADEGISYYEK 141
DB	237 LESLDMQRKHISSNEVIIEDSFKLINSEKNTLLSYKTIKESVENDIDFADEGISYYEK 296
OY	142 VLAKYKDDLLESIKKIYIKEKEKFPSSPPTPPSPAKTDQEKESKFLPLTLNIELTYNNL 201
DB	297 VLAKYKDDLLESIKKIYIKEKEKFPSSPPTTPPSPAKTDEQKESKFLPLTLNIELTYNNL 356
OY	202 VNKIDDIYILNLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFPKNPYDFAIKKLIND 261
DB	357 VNKIDDIYILNLKAKINDCNVEKDEAHVKITKLSDLKAIDDKIDLFPKNPYDFAIKKLIND 416
OY	262 DTKKDMLAKLSTGLVNPNPTIIISKLEGRKOMLNISOHCYVKKOCPENSGCCPHIDE 321
DB	417 DTKKDMLAKLSTGLVNPNPTIIISKLEGRFODMLNISOHCYVKKOCPENSGCCPHIDE 476

QY	332	REBCKCLINLYOEGBKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCTCECTKPSY	381
DB	477	REBCKCLINLYOEGBKCVENPPTCNENNGCGDADATCTEEDSGSSRRKKTCTCECTKPSY	536
QY	382	PLFDGIFCSS 391	
DB	537	PLFDGIFCSS 546	
RESULT 11			
ABP71271	ABP71271	standard; protein; 546 AA.	
XX	ABP71271;		
AC	28-APR-2003	(first entry)	
DT	P. falciparum MSP1_42 (3D7)	protein sequence in clone per-Trx42.	
XX	MSP-1_42; merozoite protein; protozoacide; vaccine; malaria; mosquito.		
OS	Plasmodium falciparum.		
PN	MO2003004525-A2.		
XX	16-JAN-2003.		
PD	25-JAN-2002; 2002WO-US002428.		
XX	29-JAN-2001; 2001US-026453P.		
PR	26-OCT-2001; 2001US-0347564P.		
XX	(REED-) REED ARMY INST RES WALTER.		
PA	Lyon JA, Angov E;		
PI	WPI; 2003-221577/21.		
XX	New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which		
XX	retains its native folding, useful for detecting and preventing malaria		
PT	infection, and for antibody production.		
PT	infection, and for antibody production.		
XX	Disclosure; Page 93-95; 104pp; English.		
ES	The invention relates to a recombinant Plasmodium falciparum merozoite		
XX	protein, (MSP)-142 which retains its native folding. The protein is		
CC	useful as a diagnostic reagent, in antibody production, and as a vaccine		
CC	against malaria. The antibody may be used for detecting and treating		
CC	chronic malaria infection. The present sequence represents a recombinant		
CC	E. coli expressed P. falciparum MAP-1_42 protein expressed in clone per-		
CC	Trx42		
XX	Sequence 546 AA:		
XX	50		
QY	Query Match	97.0%; Score 2008.5; DB 6; Length 546;	
DB	Best Local Similarity	89.5%; Pred. No. 8.3e-136;	
XX	Matches 385; Conservative	0; Mismatches 4; Indels 41; Gaps 1,	
QY	3	HHHHHPRG-----SGGTMAISV 21	
DB	117	HHHHHSSGLVPRGSMKETAAKFEROHMDSPLGTDDDKAMADIGSIEGRGTMAISV 176	
QY	22	TMDNIIISGFENEYDVYIKPLAGYRSLLKQIEKNIFTNLTNDILNSRLKRRKYFLDV 81	
DB	177	TMDNIIISGFENEYDVYIKPLAGYRSLLKQIEKNIFTNLTNDILNSRLKRRKYFLDV 236	
QY	82	LESIDIMQFKHISNEYIIEDSFKLINSBOKNTLLKSYKTIKESYENDIKFAQEGISYYEK 141	
DB	237	LESIDIMQFKHISNEYIIEDSFKLINSBOKNTLLKSYKTIKESYENDIKFAQEGISYYEK 296	
QY	142	VLAAYKODLESIKKVIYIEBKRRKFPSSPTPTPPSPAKTDEQKESKFLPFLTNITETLVNL 201	
DB	297	VLAAYKODLESIKKVIYIEBKRRKFPSSPTPTPPSPAKTDEQKESKFLPFLTNITETLVNL 356	

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QY 202 VNKIDYVILNKAKINDCNVEKDEAHVKTITKLSDKAIDDKIDLFPKNPYDEFAIKKLIND 261
DB 357 VNKIDYVILNKAKINDCNVEKDEAHVKTITKLSDKAIDDKIDLFPKNPYDEFAIKKLIND 416
QY 262 DTKDMLGKLTSTGLVQNFPTIISKLEGFQDMLNISQHCYVKQCPENSGCFRHLDE 321
DB 417 DTKDMLGKLTSTGLVQNFPTIISKLEGFQDMLNISQHCYVKQCPENSGCFRHLDE 476
QY 322 REECCCLNLYKQEGDKCVENPNPTCNENNGCGDADATCTEEDSGSSRKKITCECTKPPSY 381
DB 477 REECCCLNLYKQEGDKCVENPNPTCNENNGCGDADATCTEEDSGSSRKKITCECTKPPSY 536
QY 382 PLFDGIFCSS 391
DB 537 PLFDGIFCSS 546

RESULT 12
ADM86518
ID ADM86518 standard; protein; 546 AA.
XX
AC ADM86518;
XX
DT 03-JUN-2004 (first entry)
XX
DE PEF-Trx42 P. falciparum MSP142 (3D7) protein.
XX
KW Malaria ; vaccine ; merozoite surface protein-142 ; MSP-142 ;
KW immune response; diagnosis.
XX
OS Plasmodium falciparum.
XX
PN US2003161839-A1.
XX
PD 28-AUG-2003.
XX
PE 25-JAN-2002; 2002US-00057532.
XX
PR 29-JAN-2001; 2001US-0264535P.
XX 26-OCT-2001; 2001US-0347563P.
PA (LYON/) LYON J A.
PA (ANGO/) ANGOV E.
PA (COHE/) COHEN J D.
PA (VOSS/) VOSS G.
PI Lyon JA, Angov E, Cohen JD, Voss G;
PI MPI; 2003-843522/78.
XX
DR MPI; 2003-843522/78.
XX
PT Malaria vaccine comprises Plasmodium falciparum merozoite surface protein
PS -142.
PS Disclosure; SEQ ID NO 1; 41pp; English.
XX
CC The invention relates to a malaria vaccine which comprises Plasmodium
CC falciparum merozoite surface protein-142 (MSP-142), and an adjuvant
CC consisting of A, B, C, D, and E. The invention also relates to a method
CC for inducing protective immune response to malaria. The invention is used
CC as diagnostic reagent for antibody production or as vaccine against
CC malaria infection. The present sequence is Escherichia coli expressed P.
CC falciparum MSP142 (3D7) protein sequence in PEF-Trx42. This sequence is
CC used to illustrate the method of the invention.
XX
SQ Sequence 546 AA;

Query Match 97.0%; Score 2008.5; DB 7; Length 546;
Best Local Similarity 89.5%; Pred. No. 8.3e-136;
Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;
QY 3 HHHHHHPCG-----SSGSTMALSV 21
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DB 117 HHHHHSSGLVPRGSMKETAAAKFERQHMDSPLDGTDDDKAMADIGSIEGRGTMAISV 176
QY 22 TMDNLSGFENEVDYTYLKPLAGVYRSLLKQIEKNITFTNLNDILNSRLKRRKYPLDV 81
DB 177 TMDNLSGFENEVDYTYLKPLAGVYRSLLKQIEKNITFTNLNDILNSRLKRRKYPLDV 236
QY 82 LESDLMQFKHISSENEYIIESDFKLNSQKNTLLSKYRIKESVENDIKFAQEGISYEEK 141
DB 227 LESDLMQFKHISSENEYIIESDFKLNSQKNTLLSKYRIKESVENDIKFAQEGISYEEK 296
QY 142 VLAKKQDLSEIKKRIKEKEKEFPSSPTTTPSPAKTBOCKKESKFLPLNIEFLYNL 201
DB 297 VLAKKQDLSEIKKRIKEKEKEFPSSPTTTPSPAKTBOCKKESKFLPLNIEFLYNL 356
QY 202 VNKIDYVILNKAKINDCNVEKDEAHVKTITKLSDKAIDDKIDLFPKNPYDEFAIKKLIND 261
DB 357 VNKIDYVILNKAKINDCNVEKDEAHVKTITKLSDKAIDDKIDLFPKNPYDEFAIKKLIND 416
QY 262 DTKDMLGKLTSTGLVQNFPTIISKLEGFQDMLNISQHCYVKQCPENSGCFRHLDE 321
DB 417 DTKDMLGKLTSTGLVQNFPTIISKLEGFQDMLNISQHCYVKQCPENSGCFRHLDE 476
QY 322 REECCCLNLYKQEGDKCVENPNPTCNENNGCGDADATCTEEDSGSSRKKITCECTKPPSY 381
DB 477 REECCCLNLYKQEGDKCVENPNPTCNENNGCGDADATCTEEDSGSSRKKITCECTKPPSY 536
QY 382 PLFDGIFCSS 391
DB 537 PLFDGIFCSS 546

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RESULT 13
AAB83926
ID AAB83926 standard; protein; 375 AA.
XX
AC AAB83926;
XX
DT 23-JUL-2001 (first entry)
XX
DE A major merozoite surface protein-1 fragment of 42kDa.
XX
KW Major merozoite surface protein-1; MSP1-42; melittin signal peptide;
KW malaria vaccine.
XX
OS Plasmodium falciparum.
XX
PN WO200134188-A1.
XX
PD 17-MAY-2001.
XX
PE 09-NOV-2000; 2000WO-US031064.
XX
PR 12-NOV-1999; 98US-0165178P.
XX 01-DEC-1999; 98US-0168327P.
XX 22-AUG-2000; 2000US-0226861P.
PA (UYHA-) UNIV HAWAII.
PA (UYCH-) UNIV CHINESE HONG KONG.
PA (QUEB-) QUEBEN EMMA FOUND.
PI Hui GSN, Lap-Yin P, Ho WK;
PI MPI; 2001-335879/35.
XX
DR N-PSDB; AAF89840.
XX
PT Producing malaria vaccine, useful for treatment or prevention of all
PT forms of malaria in humans, by expressing immunogenic merozoite protein
PS fragment in a baculovirus system.
XX
SQ Example 3; Page 87-88; 95pp; English.
XX
CC The present sequence represents a major merozoite surface protein-1 C-
CC terminal fragment of 42kDa (MSP1-42). This fragment is linked to a

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CC melittin signal peptide, and then expressed in a in a
CC silkworm/baculovirus system. The protein is used to prepare a malaria
CC vaccine, which is used to treat or prevent malaria, caused by any of the
CC four species of Plasmodium that infect humans

XX Sequence 375 AA;

Query Match 95.1%; Score 1970; DB 4; Length 375;
Best Local Similarity 100.0%; Pred. No. 3e-133;
Matches 375; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 17 MAISVTMDNIISGFENEYDVIYLRPLAGVRSLLKKQIEKNITFTNLNDIINSRLKRRK 76
DB 1 MAISVTMDNIISGFENEYDVIYLRPLAGVRSLLKKQIEKNITFTNLNDIINSRLKRRK 60
QY 77 YFLDVLSDLMQFHHISSNEVYIIDSFKLNSQKNTLLSKYKIKESVENDIKFAQEG 136
DB 61 YFLDVLSDLMQFHHISSNEVYIIDSFKLNSQKNTLLSKYKIKESVENDIKFAQEG 120
QY 137 SYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKTDQKESKFLPLTNIET 196
DB 121 SYEKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKTDQKESKFLPLTNIET 180
QY 197 LYNNLVNKIDYLLNLKAKINDCNVEKDBAHVKTITKLSDLKAIIDKIDLFKNPYDFAIK 256
DB 181 LYNNLVNKIDYLLNLKAKINDCNVEKDBAHVKTITKLSDLKAIIDKIDLFKNPYDFAIK 240
QY 257 KLINDDTKKDMLGKLLSTGLVQNPNTTISKLEIGKFDQMLNISQHCVKKQCPENSGCF 316
DB 241 KLINDDTKKDMLGKLLSTGLVQNPNTTISKLEIGKFDQMLNISQHCVKKQCPENSGCF 300
QY 317 RHLDERECKCLANVKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRRKKT 376
DB 301 RHLDERECKCLANVKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRRKKT 360
QY 377 KPDGYPLFDGIFGCS 391
DB 361 KPDGYPLFDGIFGCS 375

RESULT 14
ABB79626
ID ABB79626 standard; protein; 383 AA.
XX
AC ABB79626;
XX
DT 21-OCT-2002 (first entry)
XX
DE Plasmodium falciparum merozoite surface protein-1 42 kDa fragment.
XX
KW Merozoite surface protein-1; MSP-1; malaria; vaccine; protozoacide.
XX
OS Plasmodium falciparum.
XX
PN WO200258727-A2.
XX
PD 01-AUG-2002.
XX
PF 25-JAN-2002; 2002WO-US002554.
XX
PR 26-JAN-2001; 2001US-026453P.
XX
PA (REED-) REED ARMY INST RES WALTER.
XX
PI Lyon JA, Angov E, Cohen JD, Voss G;
XX
DR WPI; 2002-590798/63.
XX
PT New vaccine comprising Plasmodium falciparum MSP-142 protein and an
XX
PS adjuvant, useful against malaria or for eliciting immune responses
XX
PS against P. falciparum.
XX
PS Disclosure; Page 95-96; 9pp; English.

XX The present sequence is the protein sequence of the C-terminal 42 kDa
CC fragment of Plasmodium falciparum 3D7 merozoite surface protein-1 (MSP-
CC 1(42)). The invention relates to the use of Escherichia coli as host for
CC the recombinant production of large amounts of MSP-1(42) which maintain
CC conformational epitopes critical for development of vaccines. The
CC vaccine are useful against malaria or for eliciting immune responses
CC against P. falciparum. The recombinant MSP-1(42) proteins are also useful
CC in diagnostic assays, for in vitro monitoring of malaria infection or
CC prognosis the response to treatment of malaria patients, and for
CC production of antibodies used for malaria antigen detection or as
CC therapeutic or prophylactic agents

XX Sequence 383 AA;

Query Match 95.0%; Score 1968; DB 5; Length 383;
Best Local Similarity 99.2%; Pred. No. 4.3e-133;
Matches 376; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 13 GSGTMAISVTMDNIISGFENEYDVIYLRPLAGVRSLLKKQIEKNITFTNLNDIINSRL 72
DB 5 GSGTMAISVTMDNIISGFENEYDVIYLRPLAGVRSLLKKQIEKNITFTNLNDIINSRL 64
QY 73 KRRKYFLDVLSDLMQFHHISSNEVYIIDSFKLNSQKNTLLSKYKIKESVENDIKFA 132
DB 65 KRRKYFLDVLSDLMQFHHISSNEVYIIDSFKLNSQKNTLLSKYKIKESVENDIKFA 124
QY 133 QEGISYEVKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKTDQKESKFLPLT 192
DB 125 QEGISYEVKVLAKYKDDLESIKKVIKEKEKFPSSPTTPSPAKTDQKESKFLPLT 184
QY 193 NIETLYNNLVNKIDYLLNLKAKINDCNVEKDBAHVKTITKLSDLKAIIDKIDLFKNPYD 252
DB 185 NIETLYNNLVNKIDYLLNLKAKINDCNVEKDBAHVKTITKLSDLKAIIDKIDLFKNPYD 244
QY 253 EAIKKLINDDTKKDMLGKLLSTGLVQNPNTTISKLEIGKFDQMLNISQHCVKKQCPEN 312
DB 245 EAIKKLINDDTKKDMLGKLLSTGLVQNPNTTISKLEIGKFDQMLNISQHCVKKQCPEN 304
QY 313 SGCPRHLDERECKCLANVKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRRKKT 372
DB 305 SGCPRHLDERECKCLANVKQEGDKCVENPNPTCNENNGGCDADATCTEEDSGSSRRKKT 364
QY 373 CECTKPDGYPLFDGIFGCS 391
DB 365 CECTKPDGYPLFDGIFGCS 383

RESULT 15
ABP71274
ID ABP71274 standard; protein; 383 AA.
XX
AC ABP71274;
XX
DT 28-APR-2003 (first entry)
XX
DE P. falciparum MSP-142 protein sequence in pMBP.
XX
KW MSP-1_42; merozoite protein; protozoacide; vaccine; malaria; mosquito.
XX
OS Plasmodium falciparum.
XX
PN WO2003004525-A2.
XX
PD 16-JAN-2003.
XX
PF 25-JAN-2002; 2002WO-US002428.
XX
PR 29-JAN-2001; 2001US-026453P.
XX
PA 26-OCT-2001; 2001US-0347564P.
XX
PS (REED-) REED ARMY INST RES WALTER.
XX

PI Lyon JA, Angov E;
XX
DR WPI: 2003-221577/21.

XX New recombinant Plasmodium falciparum merozoite protein (MSP)-142 which
PT retains its native folding, useful for detecting and preventing malaria
PT infection, and for antibody production.

XX
PS Disclosure: Page 99-100; 104pp; English.

XX The invention relates to a recombinant Plasmodium falciparum merozoite
CC protein, (MSP)-142 which retains its native folding. The protein is
CC useful as a diagnostic reagent, in antibody production, and as a vaccine
CC against malaria. The antibody may also be used for detecting and treating
CC chronic malaria infection. The present sequence represents a recombinant
CC E. coli expressed P. falciparum MAP-142 protein expressed in pMBP

XX
SQ Sequence 383 AA;

Query Match 95.0%; Score 1968; DB 6; Length 383;

Best Local Similarity 99.2%; Pred. No. 4,3e-133; Mismatches 3; Indels 0; Gaps 0;

Matches 376; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 13 GSGTMAISVTMDNIIISGFENEYDVIYLRKPLAGVRSLLKKQIEKNIFTFNLMINDILNSRL 72
DB 5 GRGTMAISVTMDNIIISGFENEYDVIYLRKPLAGVRSLLKKQIEKNIFTFNLMINDILNSRL 64
QY 73 KKRKYFLDVLESDDLMOFGHISNEYIIDSFKLNSBQNTLLKSKYIKESVENDIKFA 132
DB 65 KKRKYFLDVLESDDLMOFGHISNEYIIDSFKLNSBQNTLLKSKYIKESVENDIKFA 124
QY 133 QEGISYSEKVLAKYKDDLESIKKVIKEKEKPPSSPTTPSPAKTDEOKKESKFLPLT 192
DB 125 QEGISYSEKVLAKYKDDLESIKKVIKEKEKPPSSPTTPSPAKTDEOKKESKFLPLT 184
QY 193 NIETLYNNLVNKKIDDYLLNLKAKINDCNVEKDEAHVKITKLSDLKAIIDDKIDLFQNPYDF 252
DB 185 NIETLYNNLVNKKIDDYLLNLKAKINDCNVEKDEAHVKITKLSDLKAIIDDKIDLFQNPYDF 244
QY 253 EAIKTLINDDTKKDMLGKLLSTGLVQNFPTTIIISKILIEGKFDMLNISQHCVCVKQCPEN 312
DB 245 EAIKTLINDDTKKDMLGKLLSTGLVQNFPTTIIISKILIEGKFDMLNISQHCVCVKQCPEN 304
QY 313 SGCPRHLDEREBCCKLLVYKQEGDKCVENPNPTCNENNGGCCADATCTEEDSGSSRKKIT 372
DB 305 SGCPRHLDEREBCCKLLVYKQEGDKCVENPNPTCNENNGGCCADATCTEEDSGSSRKKIT 364
QY 373 CECTKPDSDYPLFDGIFCSS 391
DB 365 CECTKPDSDYPLFDGIFCSS 383

Search completed: May 5, 2006, 00:20:35
Job time : 189 secs

Pricer avt

CURRENT FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 1
LENGTH: 546
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: E. coli expressed P. falciparum MSP142 (3D7) Protein
Patent No. 6855322
US-10-057-531A-1

Query Match
Best Local Similarity 97.0%; Score 2008.5; DB 2; Length 546;
Matches 385; Conservative 0; Mismatches 4; Indels 41; Gaps 1;
3 HHHHHHGG-----SGSGTMAISV 21
117 HHHHHHSSGLVPRGSGMKETAAAFERQHMDSPDLGTDDDKAMADIGSIEGRGTMAISV 176
22 TWONILSGFENEYDVYIKPLAGYRSLSKQIEKNIFTFNINDILNSRLKRRKXFLDY 81
177 TWONILSGFENEYDVYIKPLAGYRSLSKQIEKNIFTFNINDILNSRLKRRKXFLDY 226
82 LESDLMQFHHISSENYIIEISFPLNSBOKNTLSKYIKESVENDIKFAOGISYERK 141
237 LESDLMQFHHISSENYIIEISFPLNSBOKNTLSKYIKESVENDIKFAOGISYERK 296
142 VLAKYKDLSESIKYIKESKRPSPPTTPSPAKTDEOKKESKFLPLTNIEETLYNNL 201
297 VLAKYKDLSESIKYIKESKRPSPPTTPSPAKTDEOKKESKFLPLTNIEETLYNNL 356
202 VNKIDYLYNLKAKINDCNVEKDAHVKITLSLKAIDKIDLPKNYPDEPAIKKLIND 261
357 VNKIDYLYNLKAKINDCNVEKDAHVKITLSLKAIDKIDLPKNYPDEPAIKKLIND 416
262 DTKDMLGKLLSTGLVONFPNTIISKLEGFQOMLINSOHCYKQCPENSGCFRHLDE 321
417 DTKDMLGKLLSTGLVONFPNTIISKLEGFQOMLINSOHCYKQCPENSGCFRHLDE 476
322 REBCKCLANKQSGDKCVENPNPTCNENNGCADATCTEEDSSSKRTCTECTKEDSY 381
477 REBCKCLANKQSGDKCVENPNPTCNENNGCADATCTEEDSSSKRTCTECTKEDSY 536
382 PLFDGIFGSS 391
537 PLFDGIFGSS 546

RESULT 5
US-09-710-000-8
Sequence 8, Application US/09710000
Patent No. 6860498
GENERAL INFORMATION:
APPLICANT: Hui, George, S.N.
APPLICANT: Ho, Walter K.K.
APPLICANT: Lap-Yin, Pang
TITLE OF INVENTION: Malaria Vaccine
FILE REFERENCE: 23461-2001100
CURRENT APPLICATION NUMBER: US/09/710,000
PRIOR FILING DATE: 2000-11-10
PRIOR APPLICATION NUMBER: 60/226,861
PRIOR FILING DATE: 2000-08-22
PRIOR APPLICATION NUMBER: 60/165,178
PRIOR FILING DATE: 1999-11-12
PRIOR APPLICATION NUMBER: 60/168,327
PRIOR FILING DATE: 1999-12-11
NUMBER OF SEQ ID NOS: 11

SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 8
LENGTH: 375
TYPE: PRT
ORGANISM: Unknown
FEATURE:
OTHER INFORMATION: amino acid sequence of PfMSP-142
US-09-710-000-8

Query Match
Best Local Similarity 95.1%; Score 1970; DB 2; Length 375;
Matches 375; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
17 MAISVTMDNLSGFENEYDVYIKPLAGYRSLSKQIEKNIFTFNINDILNSRLKRRK 76
1 MAISVTMDNLSGFENEYDVYIKPLAGYRSLSKQIEKNIFTFNINDILNSRLKRRK 60
77 YFLDVLSDLMQFHHISSENYIIEISFPLNSBOKNTLSKYIKESVENDIKFAOGIS 136
61 YFLDVLSDLMQFHHISSENYIIEISFPLNSBOKNTLSKYIKESVENDIKFAOGIS 120
137 SYEYKVLAKYKDLSESIKYIKESKRPSPPTTPSPAKTDEOKKESKFLPLTNIEET 196
121 SYEYKVLAKYKDLSESIKYIKESKRPSPPTTPSPAKTDEOKKESKFLPLTNIEET 180
197 LYNNLVNKIDYLYNLKAKINDCNVEKDAHVKITLSLKAIDKIDLPKNYPDEPAIK 256
181 LYNNLVNKIDYLYNLKAKINDCNVEKDAHVKITLSLKAIDKIDLPKNYPDEPAIK 240
257 KLINDTKDMLGKLLSTGLVONFPNTIISKLEGFQOMLINSOHCYKQCPENSGCF 316
241 KLINDTKDMLGKLLSTGLVONFPNTIISKLEGFQOMLINSOHCYKQCPENSGCF 300
317 RHLDERBCKCLANKQSGDKCVENPNPTCNENNGCADATCTEEDSSSKRTCTECT 376
301 RHLDERBCKCLANKQSGDKCVENPNPTCNENNGCADATCTEEDSSSKRTCTECT 360
377 KPDGIFGSS 391
361 KPDGIFGSS 546

RESULT 6
US-10-057-531A-5
Sequence 5, Application US/10057531A
Patent No. 6855322
GENERAL INFORMATION:
APPLICANT: Lyon, Jeffrey A.
APPLICANT: Angov, Evelina
TITLE OF INVENTION: Isolation and Purification of P. falciparum Merozoite
FILE REFERENCE: 003/241/SAP
CURRENT APPLICATION NUMBER: US/10/057,531A
PRIOR FILING DATE: 2002-01-25
PRIOR APPLICATION NUMBER: US 60/264,535
PRIOR FILING DATE: 2001-01-26
PRIOR APPLICATION NUMBER: US 60/347,564
PRIOR FILING DATE: 2001-10-26
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Apple Macintosh Microsoft Word 6.0
SEQ ID NO 5
LENGTH: 383
TYPE: PRT
ORGANISM: Plasmodium falciparum 3D7 MSP142
US-10-057-531A-5

Query Match
Best Local Similarity 95.0%; Score 1968; DB 2; Length 383;
Matches 376; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
13 GSGTMAISVTMDNLSGFENEYDVYIKPLAGYRSLSKQIEKNIFTFNINDILNSRL 72
5 GSGTMAISVTMDNLSGFENEYDVYIKPLAGYRSLSKQIEKNIFTFNINDILNSRL 64

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